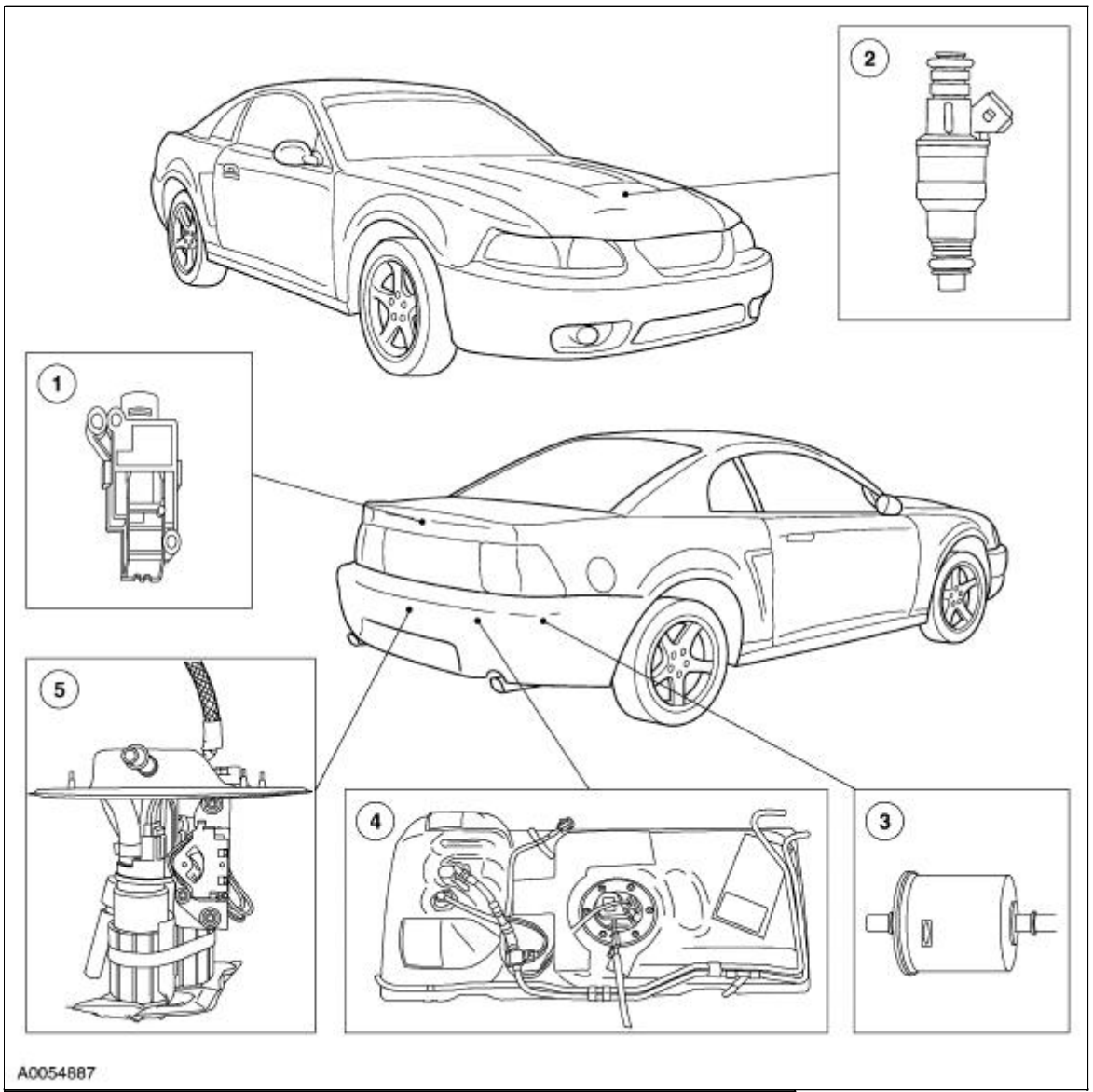
General Specifications

Item	Specification
Fuel tank capacity	59.42 liters (15.7 gallons)
Key on, engine off fuel pressure	207-345 kPa (30-50 psi)
Engine running fuel pressure (idle)	152-255 kPa (27-37 psi)
Lubricants	
SAE 5W-20 Super Premium Synthetic Blend Motor Oil XO-5W20-QSP	WSS-M2C153-H

Fuel System

Component Location



Item	Part Number	Description
1	9341	Inertia fuel shutoff switch
2	9F593	Fuel injector
3	9155	Fuel filter
4	9002	Fuel tank
5	9H307	Fuel pump module and flange assembly

WARNING: Do not smoke or carry lighted tobacco or open flame of any type when working on or near any fuel-related components. Highly flammable mixtures are always present and may be ignited, resulting in possible personal injury.

The vehicle:

- uses a returnless fuel system.
- is equipped with a multiport fuel injection (MFI) system.
- uses separately controlled fuel injectors (9F593) for each cylinder. The fuel injectors are mounted to the intake manifold.
- fuel injectors are supplied with pressurized fuel from the fuel pump (9350) through the fuel injection supply manifold (9D280).
- fuel injection supply manifold is controlled by the electronic fuel delivery module which is enabled by the powertrain control module (PCM) (12A650).

Fuel System

Refer to the Powertrain Control/Emissions Diagnosis (PC/ED) manual.

Pressure Relief

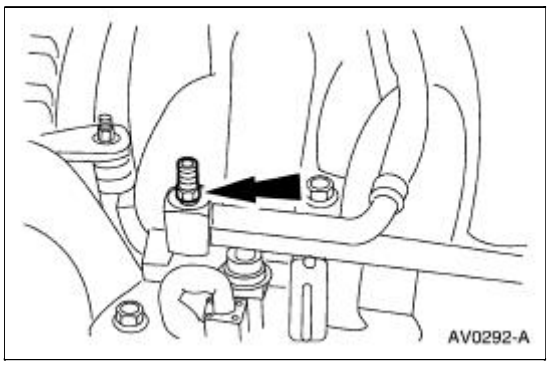
Special Tool(s)

ST1371-A	Fuel Pressure Gauge 310-012 (T80L-9974-B)

WARNING: Do not smoke or carry lighted tobacco or open flame of any type when working on or near any fuel-related components. Highly flammable mixtures are always present and may be ignited, resulting in possible personal injury.

WARNING: Fuel in the fuel system remains under high pressure even when the engine is not running. Before servicing or disconnecting any of the fuel lines or fuel system components, the fuel system pressure must be relieved to prevent accidental spraying of fuel, causing personal injury or a fire hazard.

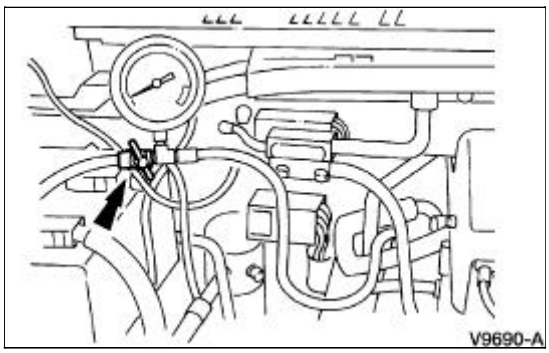
1. Remove the Schrader valve cap and install the Fuel Pressure Gauge.



2. **CAUTION: Open the manual valve slowly on the Fuel Pressure Gauge.**

   Relieve the fuel pressure.

   - Place the fuel in a suitable container.



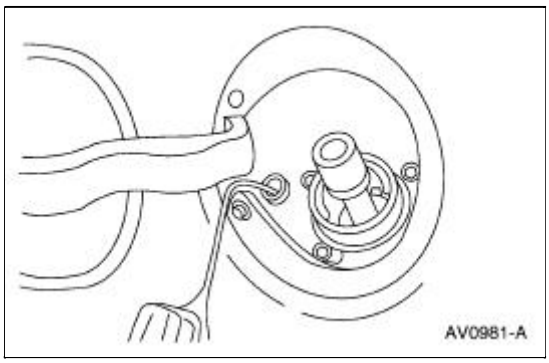
Fuel Tank Draining

Special Tool(s)

ST1134-A	Fuel Storage Tanker 164-R3202 or equivalent
ST2134-A	Fuel Tank Drain Hose 310-F013

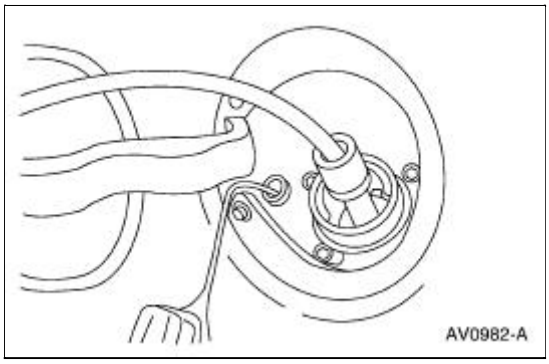
WARNING: Do not smoke or carry lighted tobacco or an open flame of any type when working on or near any fuel-related components. Highly flammable mixtures are always present and may be ignited, resulting in possible personal injury.

1. Disconnect the battery ground cable. For additional information, refer to Section 414-01 .
2. Remove the fuel tank filler cap.
3. Insert the hose guide into the filler neck.



4. **NOTE:** Insert the hose until the stop contacts the guide tube. If the stop does not contact the guide tube, remove the hose and repeat the procedure.

   Insert the chamfered end of the hose into the filler neck through the guide tube.



5. Attach the Fuel Storage Tanker to the hose and remove the fuel.
6. Remove the hose and the hose guide.

Spring Lock Couplings

Special Tool(s)

ST1146-A	Disconnect Tool, Spring Lock Coupling (3/8 inch yellow) 310-D004 (D87L-9280-A) or equivalent
ST1147-A	Disconnect Tool, Spring Lock Coupling (1/2 inch green) 310-D005 (D87L-9280-B) or equivalent

Material

Item	Specification
SAE 5W-20 Super Premium Synthetic Blend Motor Oil XO-5W20-QSP or equivalent	WSS-M2C153-H

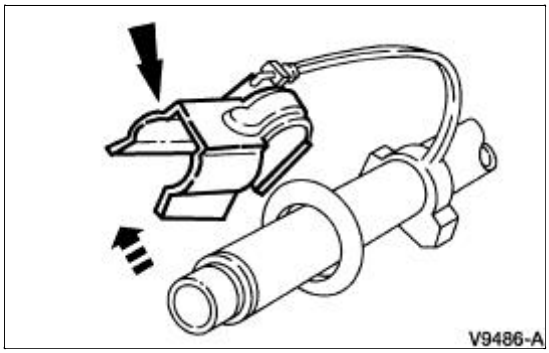
Disconnect

WARNING: Do not smoke or carry lighted tobacco or open flame of any type when working on or near any fuel-related components. Highly flammable mixtures are always present and may be ignited, resulting in possible personal injury.

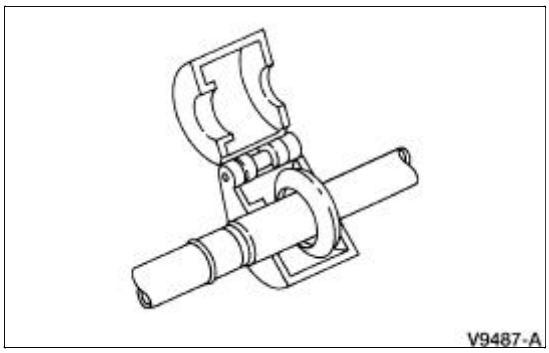
WARNING: Fuel in the fuel system remains under high pressure even when the engine is not running. Before servicing or disconnecting any of the fuel lines or fuel system components, the fuel system pressure must be relieved to prevent accidental spraying of fuel, causing personal injury or a fire hazard.

1. Relieve the fuel system pressure. For additional information, refer to Pressure Relief in this section.

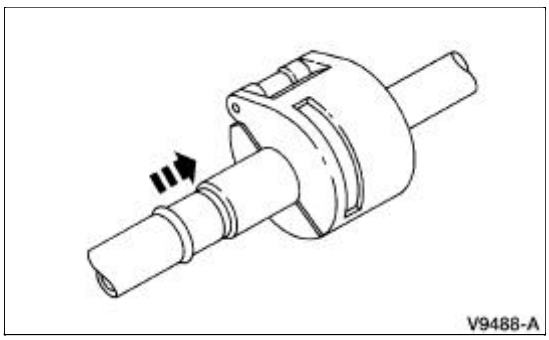
2. Remove the fuel tube clip.



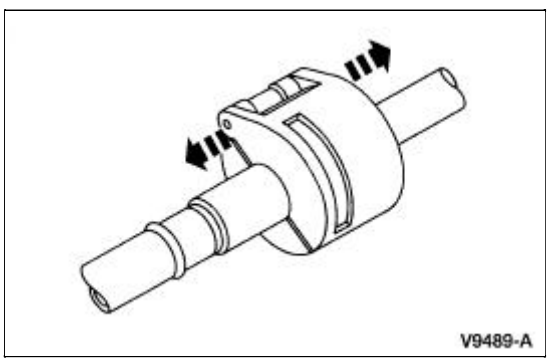
3. Install the Spring Lock Coupler Tool.



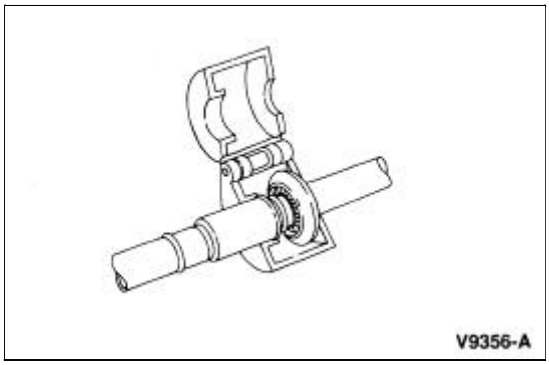
4. Close and push the Spring Lock Coupler Tool into the open side of the cage.



5. Separate the fitting.



6. Remove the Spring Lock Coupler Tool.

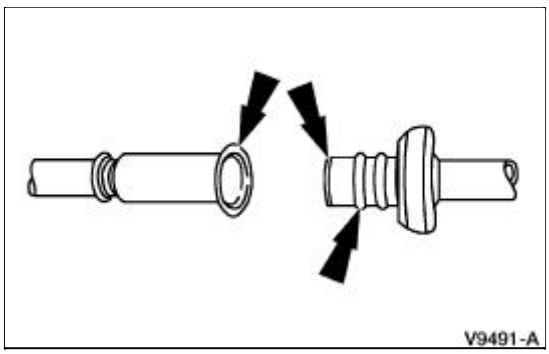


Connect

1. **NOTE:** Inspect and clean both the coupling ends. Lubricate the O-ring seals with clean engine oil.

   Connect the fitting.

   - Pull on the fitting to make sure it is fully engaged.
   - Install the safety clip.



Fuel Line Fittings —Push Connect

Special Tool(s)

ST1399-A	Disconnect Tool, Spring Lock Coupling 310-S039 (T90T-9550-S)

Material

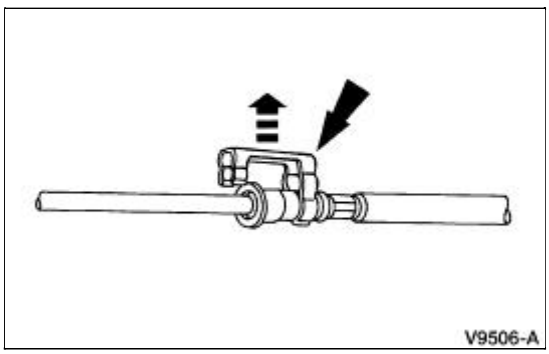
Item	Specification
SAE 5W-20 Super Premium Blend Motor Oil XO-5W20-QSP or equivalent	WSS-M2C153-H

Disconnect

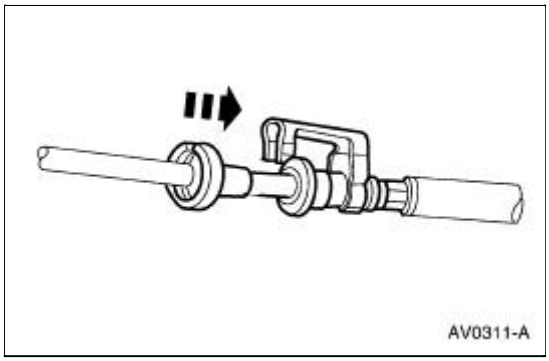
WARNING: Do not smoke or carry lighted tobacco or open flame of any type when working on or near any fuel-related components. Highly flammable mixtures are always present and may be ignited, resulting in possible personal injury.

WARNING: Fuel in the fuel system remains under high pressure even when the engine is not running. Before servicing or disconnecting any of the fuel lines or fuel system components, the fuel system pressure must be relieved to prevent accidental spraying of fuel, causing personal injury or a fire hazard.

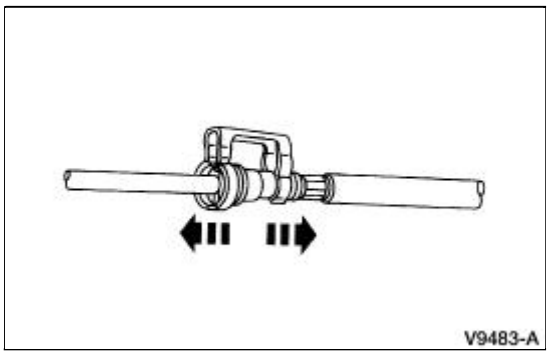
1. Relieve the fuel system pressure. For additional information, refer to Pressure Relief in this section.
2. Disconnect the safety clip from the male hose.


V9506-A

3. Install the Fuel Line Disconnect Set and push into the fitting.



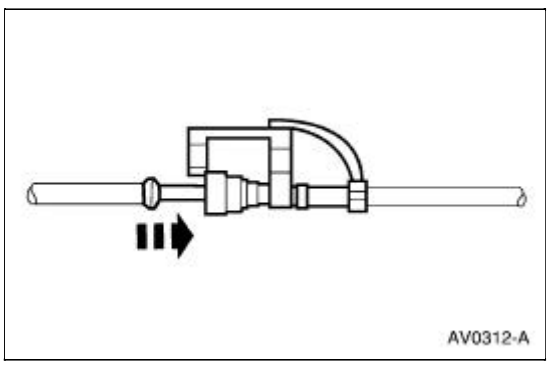
4. Separate the fittings.
    - Clean and inspect the fittings for damage.



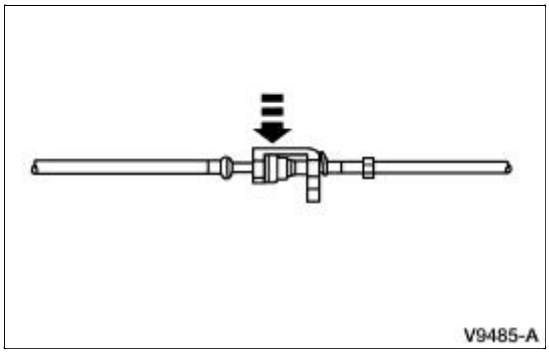
Connect

1. **NOTE:** Lubricate the tube end with clean engine oil to ease assembly.

   Connect the fitting.
    - Align the tube to the fitting and push until you hear a click.



2. Pull on the fitting to make sure it is fully engaged, then install the safety clip.


V9485-A

Fittings —R-Clip

Material

Item	Specification
SAE 5W-20 Super Premium Synthetic Blend Motor Oil XO-5W20-QSP or equivalent	WSS-M2C153-H

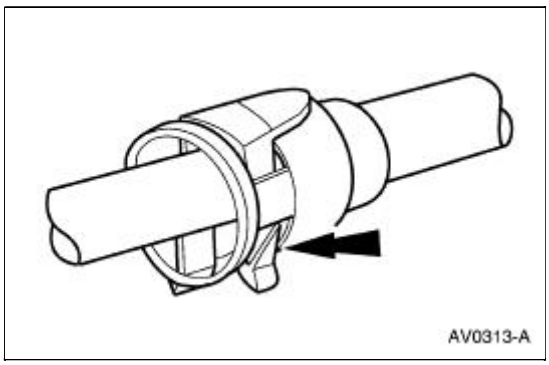
Disconnect

WARNING: Do not smoke or carry lighted tobacco or open flame of any type when working on or near any fuel-related components. Highly flammable mixtures are always present and may be ignited, resulting in possible personal injury.

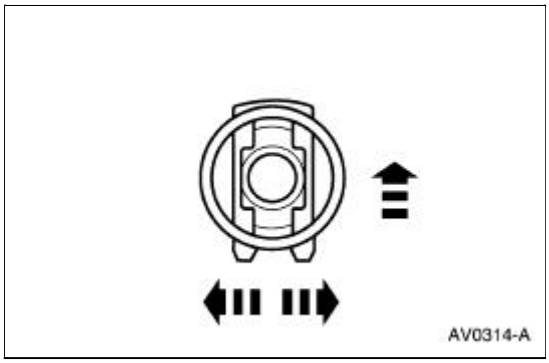
WARNING: Fuel in the fuel system remains under high pressure even when the engine is not running. Before servicing or disconnecting any of the fuel lines or fuel system components, the fuel system pressure must be relieved to prevent accidental spraying of fuel, causing possible personal injury or a fire hazard.

CAUTION: Do not use any tools. The use of tools may cause a deformity in the clip components which may cause fuel leaks.

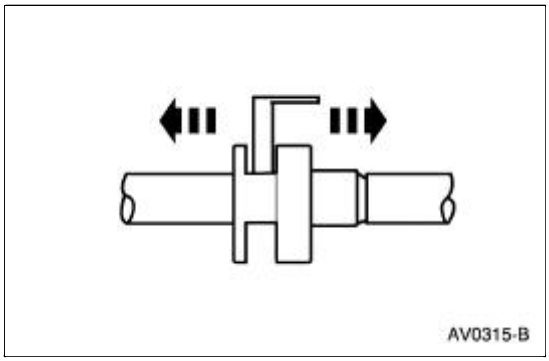
1. Relieve the fuel system pressure. For additional information, refer to Pressure Relief in this section.
2. Remove the shipping tab by bending.



3. Spread the R-clip legs and push the clip into the fitting.



4. Separate the fitting from the tube.

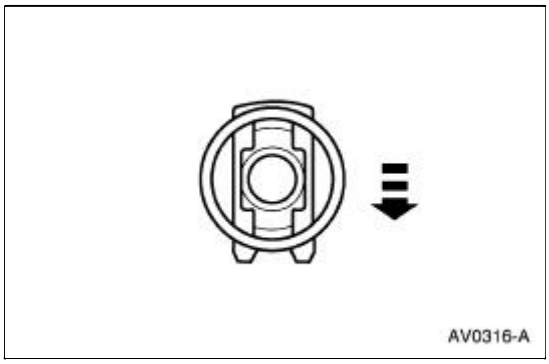


Connect

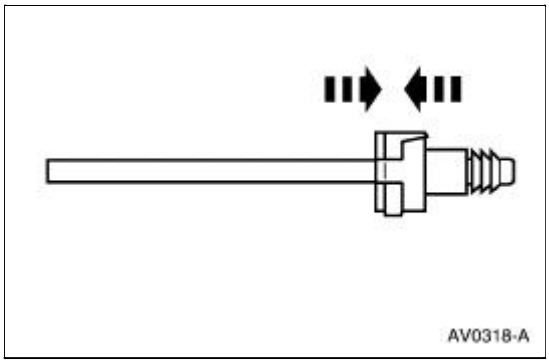
1. **NOTE:** Apply a light coat of clean engine oil.

   Clean and inspect the fitting and the tube for damage.

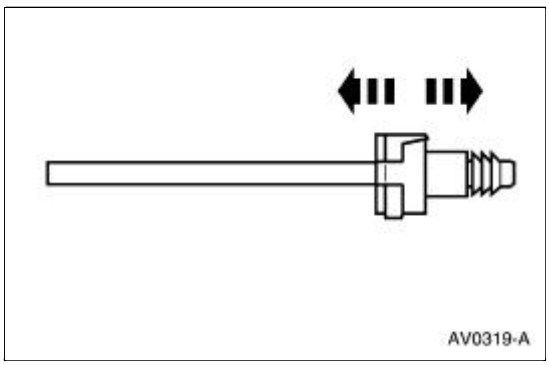
2. Insert the R-clip into the fitting.



3. Insert the tube in the fitting and push together until a click is heard.



4. Pull on the connection to make sure it is fully engaged.



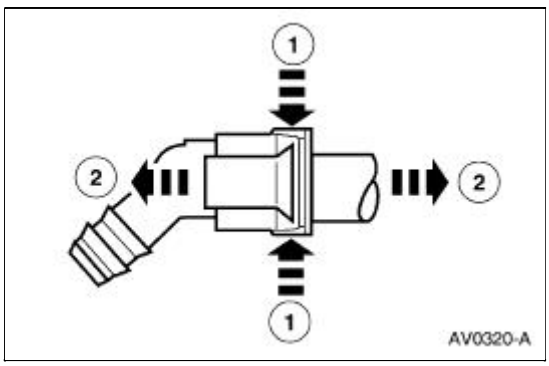
Fittings —Vapor Tube

Disconnect

1. **WARNING: The evaporative emission system contains fuel vapor and condensed fuel vapor. Although not present in large quantities, it still presents the danger of explosion or fire. Disconnect the battery ground cable from the battery to minimize the possibility of an electrical spark occurring, possibly causing a fire or explosion if fuel vapor or fuel liquid is present in the area.**

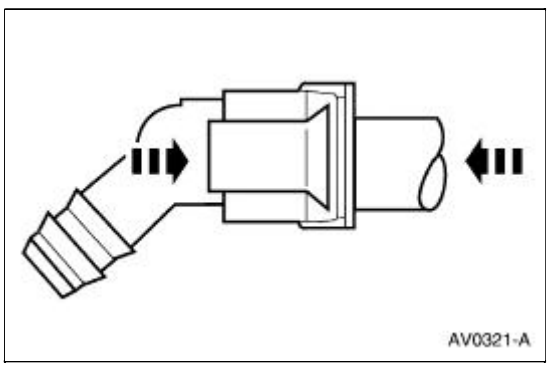
   Disconnect the battery ground cable.

2. Disconnect the vapor tube from the fitting.
   1. Squeeze the fitting.
   2. Disconnect the vapor tube from the fitting.

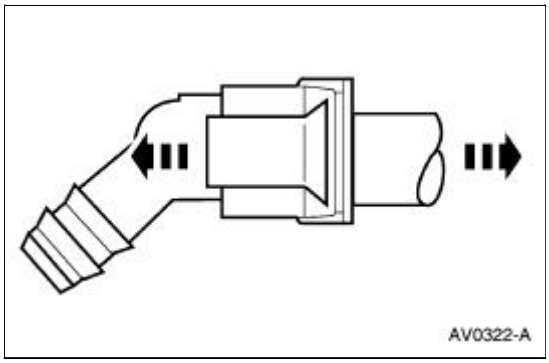


Connect

1. Clean and inspect the fitting and the tube for damage.
2. Push the tube into the fitting until it snaps in place.



3. Pull on the connection to make sure the fitting is secure.


AV0322-A

General Specifications

Item	Specification
Lubricants	
Premium Long Life Grease XG-1-C or XG-1-K	ESA-M1C75-B
Serfactant (Merpol)	ESE-M99B144-B

Torque Specifications

Description	Nm	lb-ft	lb-in
Fuel tank support strap bolts	35	26	—
Fuel tank filler pipe support bracket bolt	8	—	71
Fuel delivery module bolts	10	—	89
Fuel filter bracket bolts	10	—	89

Fuel Tank And Lines

WARNING: Do not smoke, carry lighted tobacco or an open flame of any type when working on or near any fuel-related component. Highly flammable mixtures are always present and may be ignited, possibly resulting in personal injury.

The vehicle utilizes a returnless fuel system consisting of:

- the fuel tank.
- a fuel tank filler pipe which contains a restrictor plate to permit only unleaded fuel to be pumped into the fuel tank.
- a 1/8 turn fuel tank filler cap.
- a fuel filter providing filtration to protect the fuel injectors.
- a single fuel line accommodating the returnless fuel system.
- a fuel injection supply manifold which contains a differential pressure sensor and a fuel temperature sensor.
- a fuel pump and sender assembly which provides pressurized fuel to the engine and contains:
  - an inlet filter.
  - a check valve which maintains system pressure after the pump is shut off.
  - a pressure relief valve for overpressure protection in the event of restricted flow.

The fuel pump is controlled by an electronic fuel pump driver module which is enabled by the powertrain control module (PCM). Electrical power to the fuel pump is provided through the inertia fuel shutoff (IFS) switch, which is located in the luggage compartment.

Fuel Tank And Lines

Refer to the Powertrain Control/Emissions Diagnosis (PC/ED) manual.

Fuel Tank

Material

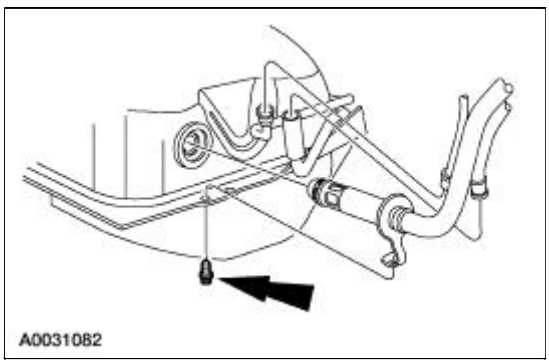
Item	Specification
Serfactant (Merpol)	ESE-M99B144-B

Removal

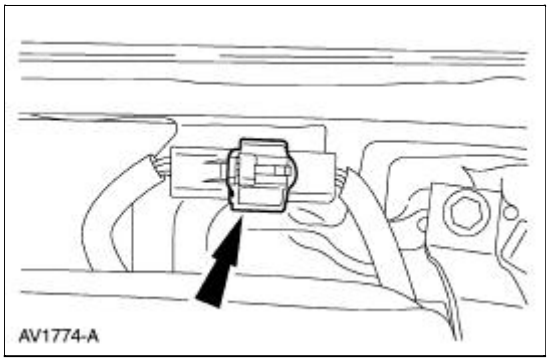
WARNING: Do not smoke, carry lighted tobacco or an open flame of any type when working on or near any fuel-related components. Highly flammable mixtures are always present and may be ignited, possibly resulting in personal injury.

WARNING: Fuel supply lines on all vehicles equipped with fuel injected engines will remain pressurized for long periods of time after engine shutdown. Fuel system pressure must be relieved prior to fuel system service to prevent possible personal injury or a fire hazard.

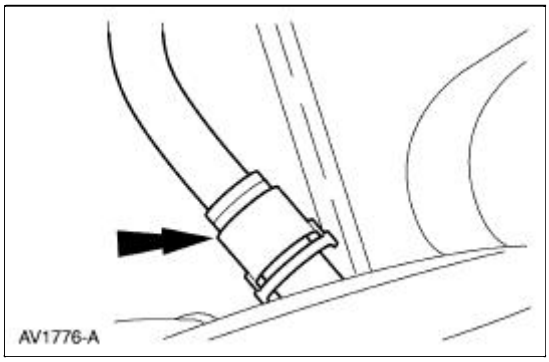
1. Disconnect the battery. For additional information, refer to Section 414-01 .
2. Relieve the fuel system pressure. For additional information, refer to Section 310-00 .
3. Drain the fuel tank. For additional information, refer to Section 310-00 .
4. Raise the vehicle. For additional information, refer to Section 100-02 .
5. Remove the filler pipe bolt and disconnect the filler pipe hose connections to the fuel tank.



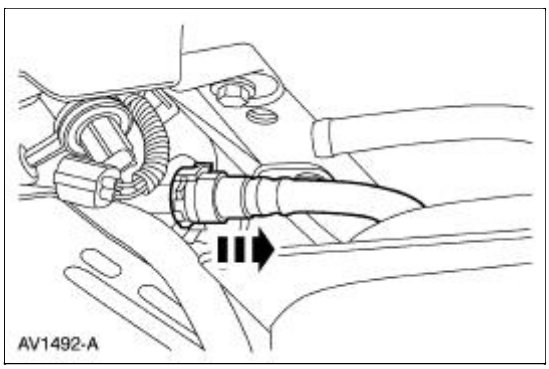
6. Disconnect the fuel tank electrical connector.



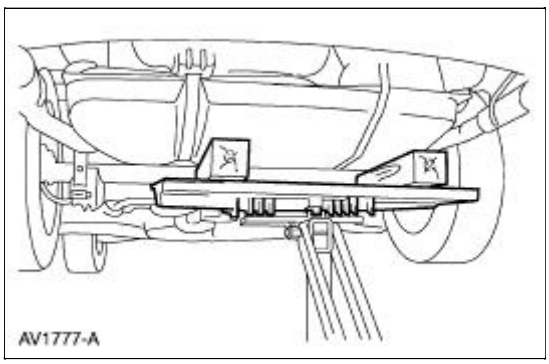
7. Disconnect the vapor tube fitting at the left front of the fuel tank.



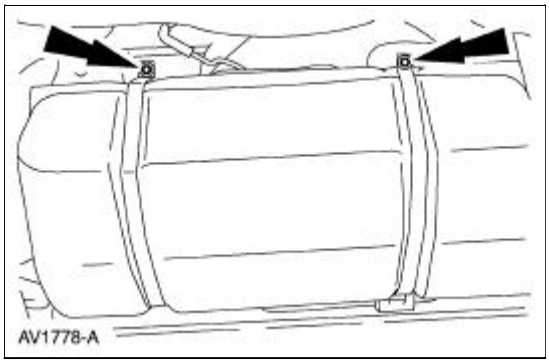
8. Disconnect the EVAP canister tube and hose.



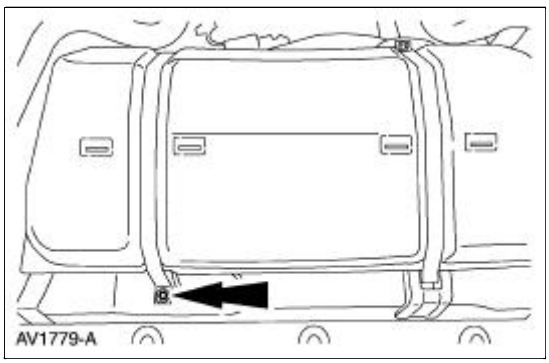
9. Place a safety support under the fuel tank.



10. Remove the front bolts from the fuel tank support straps and swing the LH strap out of the way.



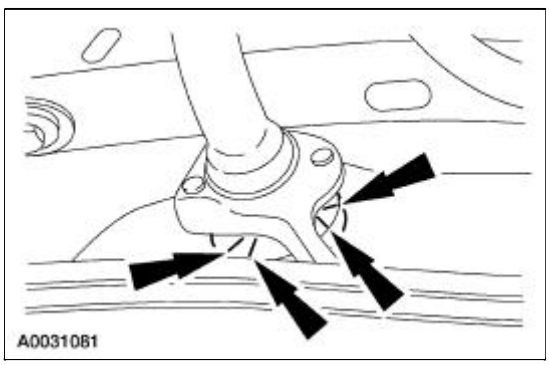
11. Remove the RH fuel tank support strap bolt and remove the strap.



12. Partially lower the fuel tank and disconnect the fuel line. For additional information, refer to Section 310-00 .

13. **CAUTION: The filler pipe grommet must be removed prior to removing the fuel tank from the filler pipe or damage to the fill tube check valve will occur.**

    Cut outer edge of pipe-to-tank grommet to facilitate pipe removal and carefully remove the grommet from the fuel tank. Take care to avoid damage to the filler pipe check valve.



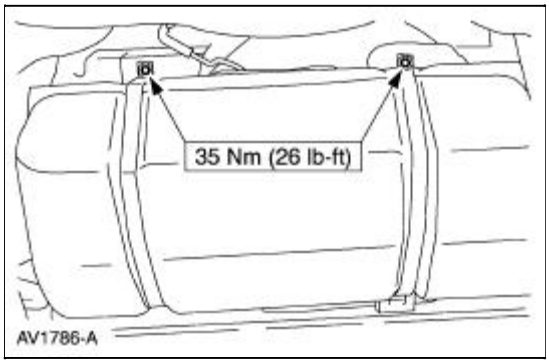
14. Lower the fuel tank from the vehicle.

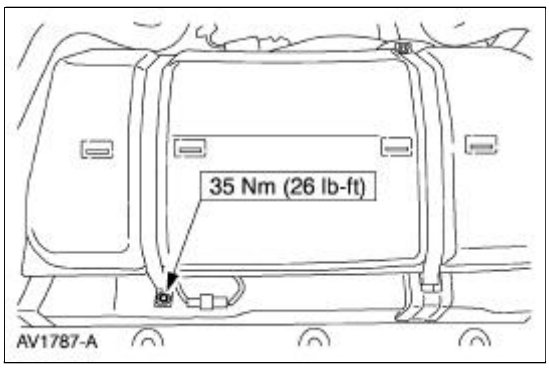
Installation

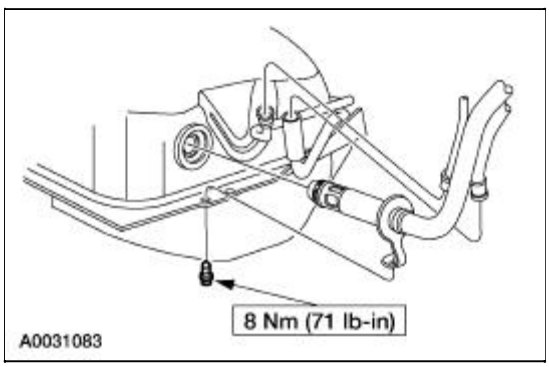
1. **CAUTION: Lubricate the filler pipe check valve area and the tank-to-filler pipe grommet with Serfactant prior to assembly or damage to the filler pipe check valve will occur.**

   NOTE: A new grommet must be used for the installation procedure due to its destruction during removal.

To install, reverse the removal procedure.







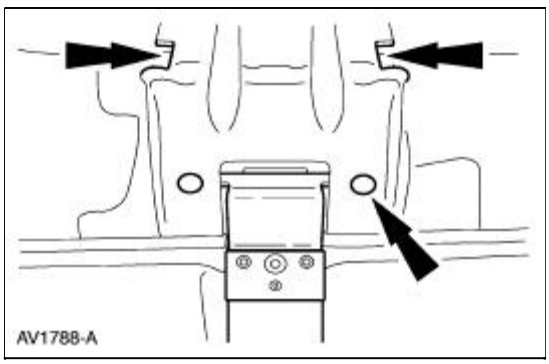
Support Straps

Removal

WARNING: Do not smoke, carry lighted tobacco or an open flame of any type when working on or near any fuel-related components. Highly flammable mixtures are always present and may be ignited, possibly resulting in personal injury.

WARNING: Fuel supply lines on all vehicles equipped with fuel injected engines will remain pressurized for long periods of time after engine shutdown. Fuel system pressure must be relieved prior to fuel system service to prevent possible personal injury or a fire hazard.

1. Remove the fuel tank. For additional information, refer to Fuel Tank in this section.
2. Slide the strap and the retaining pin into the recess and remove the strap retaining pin.



3. Remove the strap.

Installation

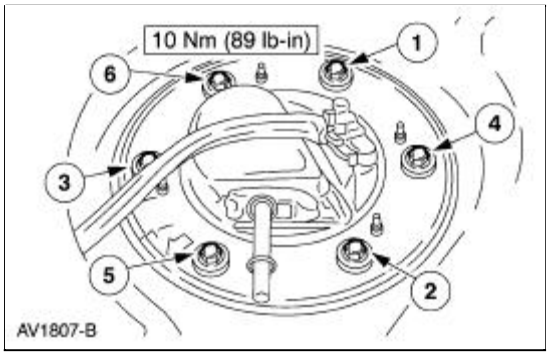
1. To install, reverse the removal procedure.

Fuel Pump Module

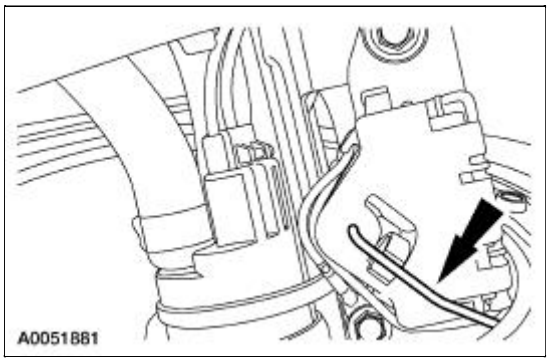
Removal and Installation

1. Remove the fuel tank. For additional information, refer to Fuel Tank in this section.
2. **NOTE:** For installation, tighten the bolts in the sequence shown.

   Remove the module assembly flange bolts.



3. Clean the area around the fuel delivery module mounting flange.
4. Lift the fuel pump, carefully detach the fuel float arm and remove the fuel pump from the fuel tank.



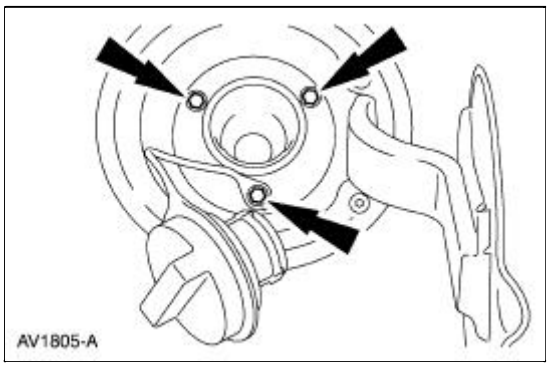
5. **NOTE:** Install a new fuel pump O-ring.

   To install, reverse the removal procedure.

Fuel Tank Filler Pipe

Removal

1. Remove the fuel tank. For additional information, refer to Fuel Tank in this section.
2. Remove the bolts from the filler pipe housing.



3. Remove the bolts from the filler pipe rubber boot-to-floor pan.
4. Remove the hose attached to the upper part of the pipe.
5. Rotate the pipe downward to clear the filler pipe pocket and pull it into the trunk area.

Installation

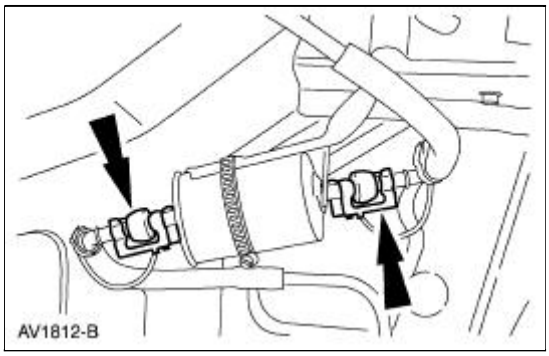
1. To install, reverse the removal procedure.

Fuel Filter

Removal

WARNING: Fuel supply lines on all vehicles equipped with fuel injected engines will remain pressurized for long periods of time after engine shutdown. Fuel system pressure must be relieved prior to fuel system service to prevent possible personal injury or a fire hazard.

1. Disconnect the battery. For additional information, refer to Section 414-01 .
2. Relieve the fuel system pressure. For additional information, refer to Section 310-00 .
3. Raise the vehicle. For additional information, refer to Section 100-02 .
4. Disconnect the filter push connect fittings. For additional information, refer to Section 310-00 .
5. Unsnap the filter from the bracket and remove.



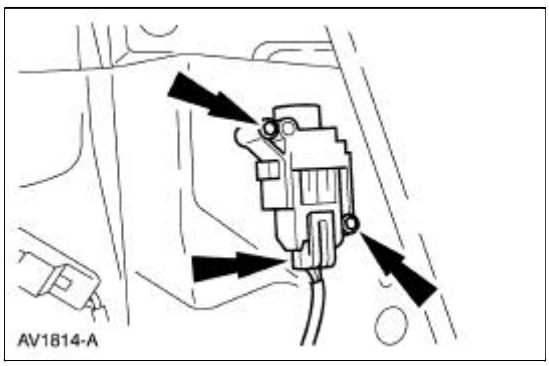
Installation

1. To install, reverse the removal procedure.

Inertia Fuel Shutoff (IFS) Switch

Removal

1. Disconnect the battery. For additional information, refer to Section 414-01 .
2. Open the luggage compartment.
3. Remove the inertia fuel shutoff (IFS) switch electrical connector and screws and remove the switch.

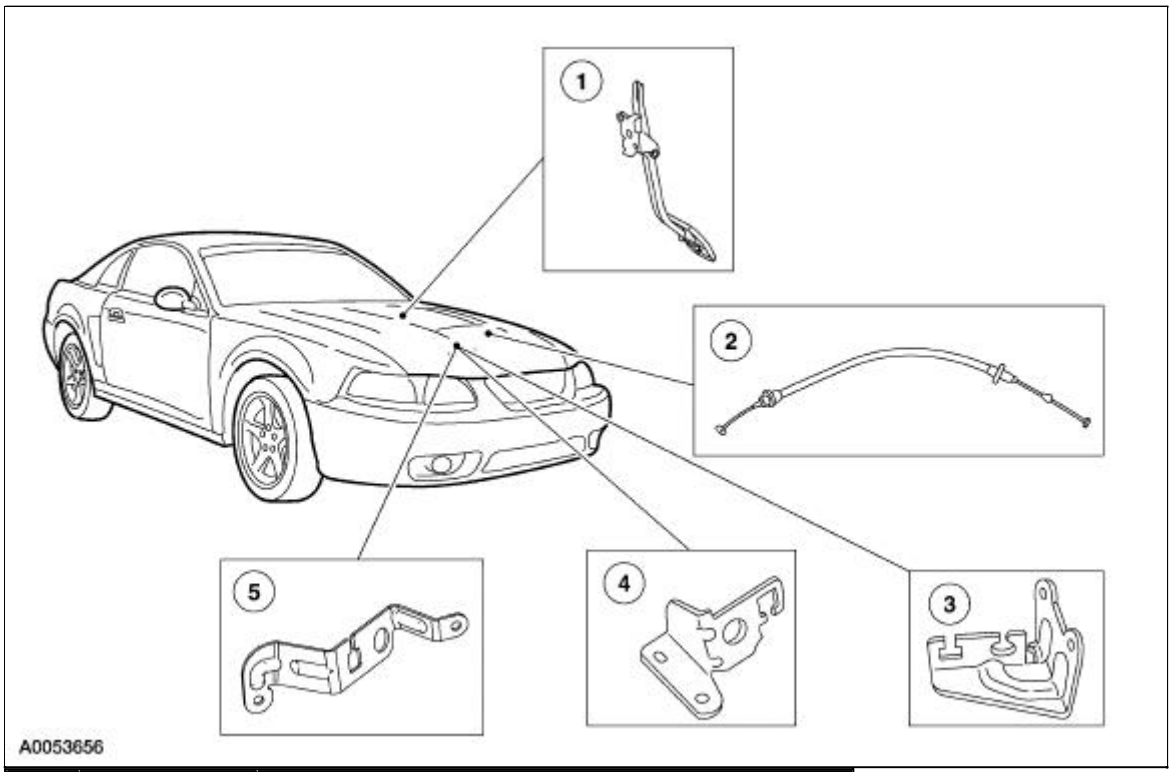


Installation

1. To install, reverse the removal procedure.

Acceleration Control

Component Locations



Item	Part Number	Description
1	9725	Accelerator pedal and shaft
2	9A758	Accelerator cable
3	9728	Accelerator cable bracket, 3.8L
4	9728	Accelerator cable bracket, 4.6L (2V)
5	—	Accelerator cable bracket, Supercharged engine

The throttle is controlled by the accelerator cable which is connected to the accelerator pedal and shaft.

- The accelerator pedal and shaft should travel smoothly from the idle to the wide-open throttle (WOT) positions. Hesitation on return or prevention of return to the idle position must not occur.
- Surrounding components such as wiring, hoses, sound insulator and floor covering must not contact the sliding inner member of the accelerator cable or the accelerator pedal and shaft.
- The sliding inner member of the accelerator cable should not be lubricated and is not serviceable.

Acceleration Control

Inspection and Verification

1. Verify the customer's concern by operating the acceleration control system to duplicate the condition.
2. Inspect to determine if any of the following mechanical concerns apply:

Visual Inspection Chart

Mechanical
● damaged accelerator pedal and shaft ● damaged linkage ● damaged accelerator cable ● high engine idle speed ● damaged throttle body

3. If the inspection reveals an obvious concern that can be readily identified, repair as required.
4. If the concern remains after the inspection, determine the symptom(s) and GO to Symptom Chart .

Symptom Chart

Symptom Chart

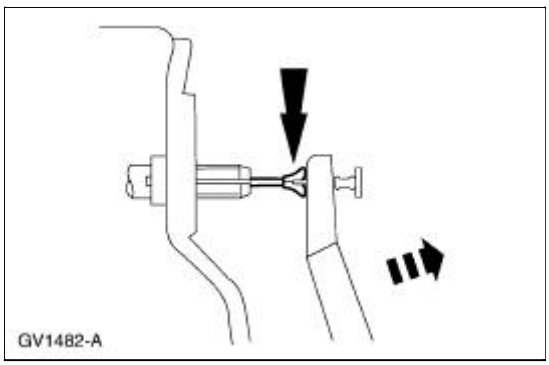
Condition	Possible Sources	Action
● Excessive effort needed to depress accelerator pedal and shaft	● Worn accelerator lever pivot bushing.	● INSTALL a new accelerator pedal and shaft.
	● Accelerator cable binding.	● INSTALL a new accelerator cable.
	● Worn or damaged throttle body.	● INSTALL a new throttle body. REFER to Section 303-04A or Section 303-04B .
● Accelerator pedal and shaft feels rough or raspy	● Frayed or binding accelerator cable.	● INSTALL a new accelerator cable.
	● Worn or damaged throttle body.	● INSTALL a new throttle body. REFER to Section 303-04A or Section 303-04B .
● Accelerator pedal and shaft binds or sticks	● Kinked accelerator cable.	● INSTALL a new accelerator cable.

	• Foreign object caught in accelerator pedal linkage. • Worn or damaged throttle body.	• CHECK the accelerator pedal linkage. • INSTALL a new throttle body. REFER to Section 303-04A or Section 303-04B .
• High engine idle speed	• Kinked accelerator cable. • Foreign object caught in accelerator pedal linkage. • Incorrect engine idle speed.	• INSTALL a new accelerator cable. • CHECK the accelerator pedal linkage. • REFER to the Powertrain Control/Emissions Diagnosis (PC/ED) manual for diagnosis and testing of the idle control system.

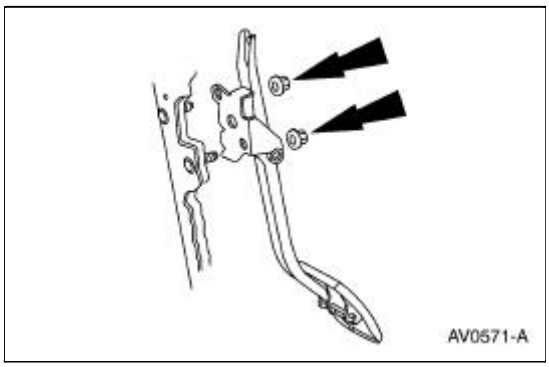
Accelerator Pedal and Shaft

Removal and Installation

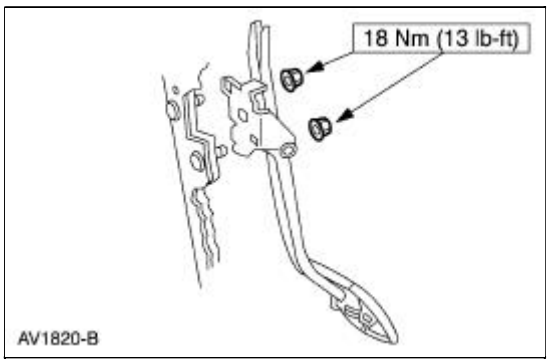
1. Push the accelerator cable nylon bushing out of the accelerator pedal and shaft arm.



2. Remove the accelerator pedal and shaft.
   - Remove the nuts.
   - Remove the accelerator pedal and shaft.



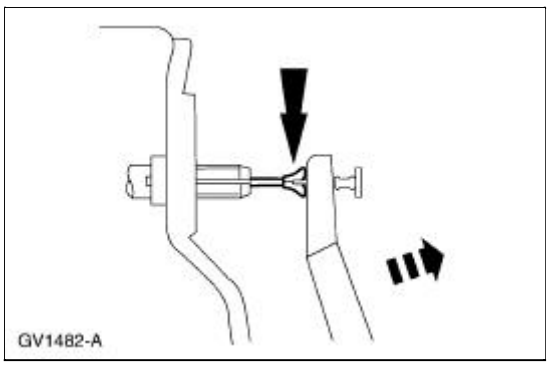
3. To install, reverse the removal procedure.



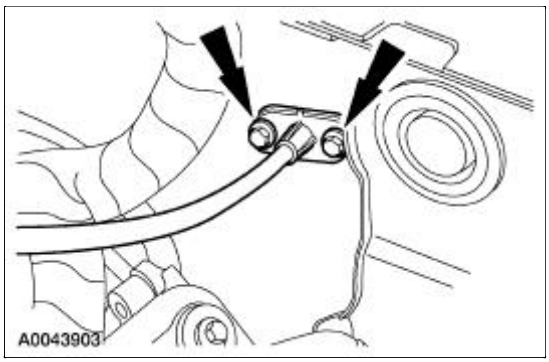
Accelerator Cable —3.8L

Removal and Installation

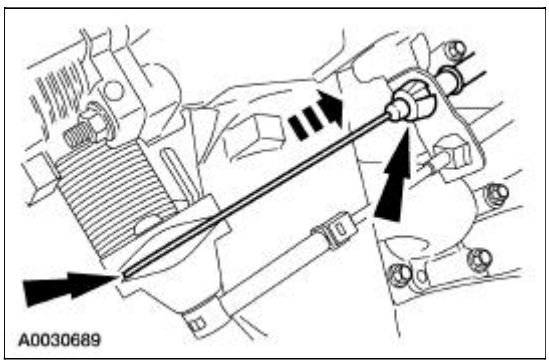
1. Push the accelerator cable nylon bushing out of the accelerator pedal and shaft arm.



2. Remove the bolts retaining the accelerator cable to the dash panel.



3. Disconnect the accelerator cable from the throttle body by rotating the throttle body full open and aligning the cable with the release slot.



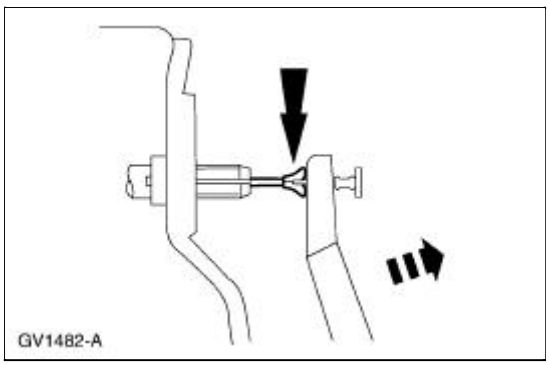
4. Disconnect the accelerator cable from the retaining bracket by compressing the locking tabs and back-feeding the cable through the bracket and out of the engine compartment.

5. To install, reverse the removal procedure.

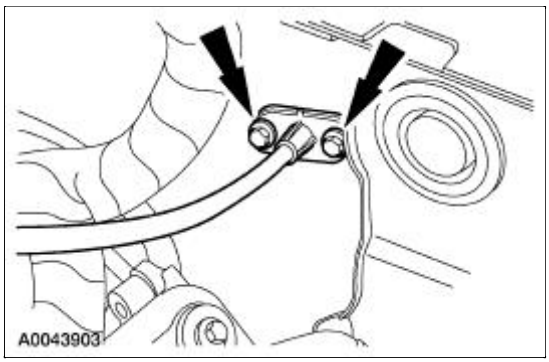
Accelerator Cable —4.6L (2V)

Removal and Installation

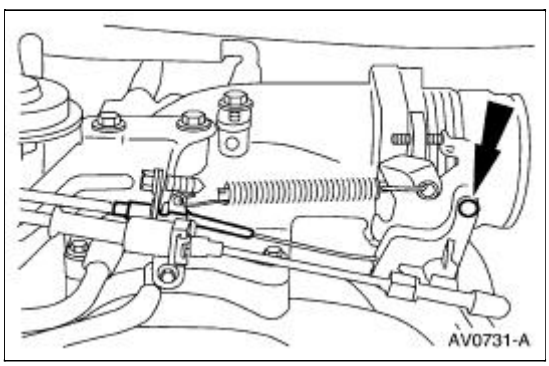
1. Push the accelerator cable nylon bushing out of the accelerator pedal and shaft arm.



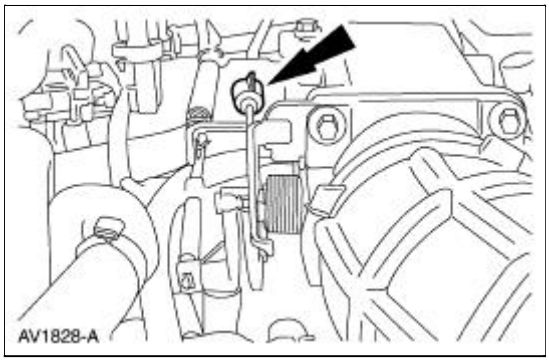
2. Remove the bolts retaining the accelerator cable to the dash panel.



3. Disconnect the accelerator cable from the throttle body by rotating the throttle body full open and aligning the cable with the release slot.



4. Disconnect the accelerator cable from the retaining bracket by compressing the locking tabs and back-feeding the cable through the bracket and out of the engine compartment.

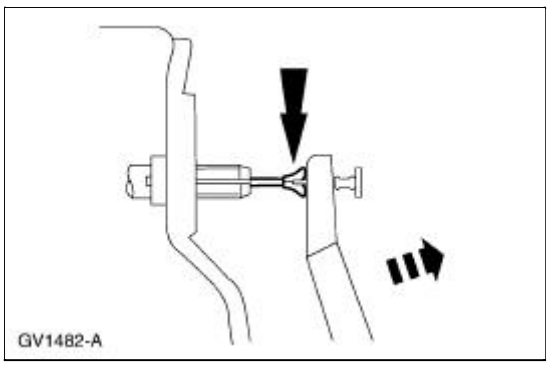


5. To install, reverse the removal procedure.

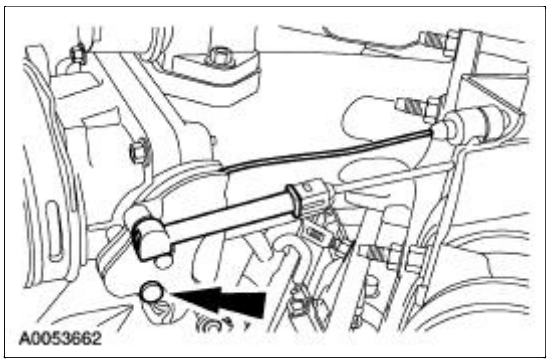
Accelerator Cable —Supercharged Engine

Removal and Installation

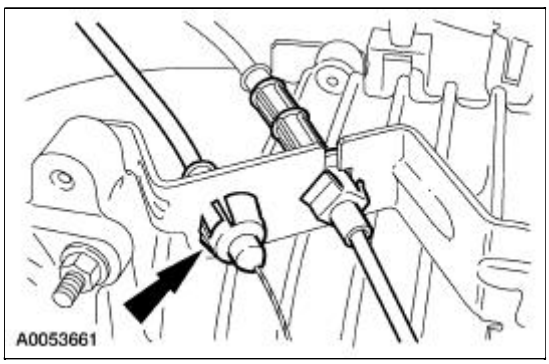
1. Push the accelerator cable nylon bushing out of the accelerator pedal and shaft arm.



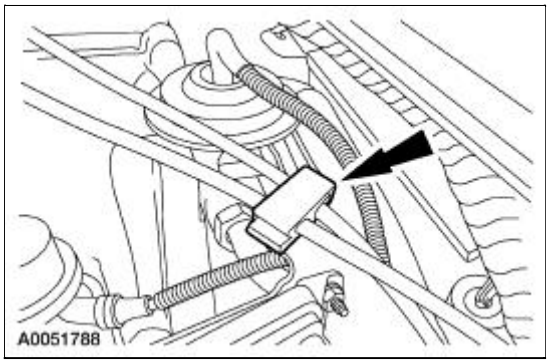
2. Disconnect the accelerator cable from the throttle cam.



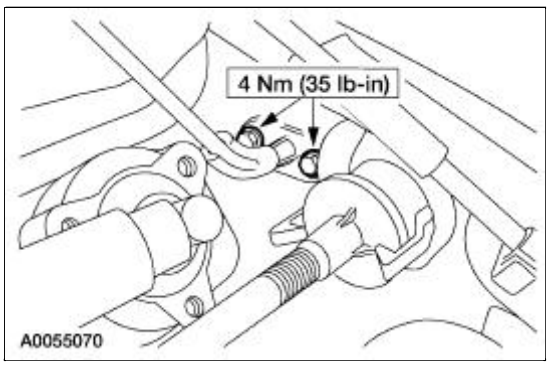
3. Depress the tabs and disconnect the accelerator cable from the bracket.



4. Release the clip and position the accelerator cable aside.



5. Remove the bolts and the accelerator cable.



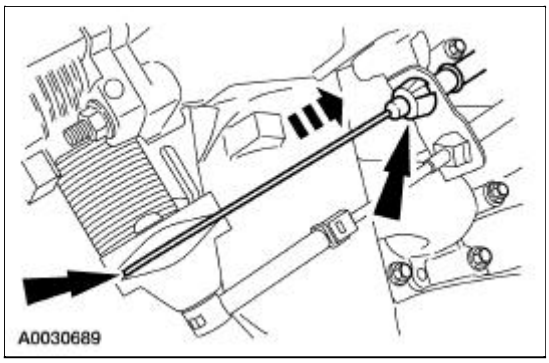
6. To install, reverse the removal procedure.

Accelerator Cable Bracket —3.8L

Removal and Installation

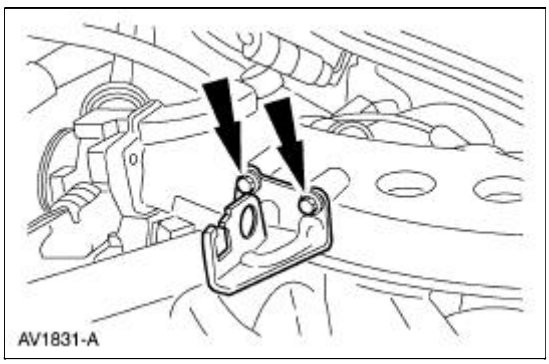
1. Disconnect the speed control cable from the throttle body and the bracket. For additional information, refer to Section 310-03 .

2. Disconnect the accelerator cable from the throttle body by rotating the throttle body full open and aligning the cable with the release slot.



3. Compress the accelerator cable locking tabs and disconnect the accelerator cable from the accelerator cable bracket.

4. Remove the bolts and the accelerator cable bracket.



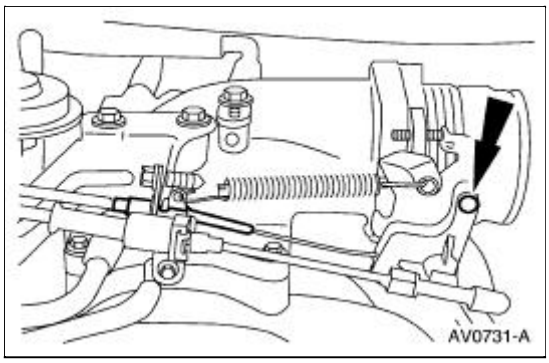
5. To install, reverse the removal procedure.

Accelerator Cable Bracket —4.6L (2V)

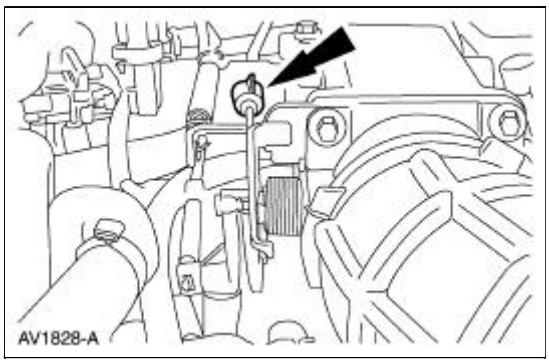
Removal and Installation

1. Disconnect the speed control cable from the throttle body and the bracket. For additional information, refer to Section 310-03 .

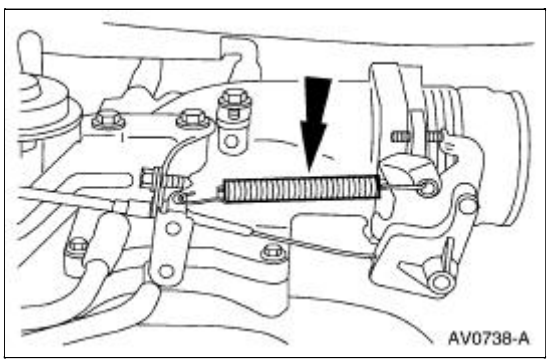
2. Disconnect the accelerator cable from the throttle body by rotating the throttle body full open and aligning the cable with the release slot.



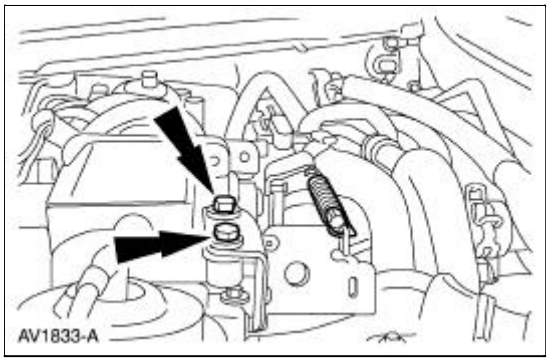
3. Compress the accelerator cable locking tabs and disconnect the accelerator cable from the accelerator cable bracket.



4. Remove the spring.



5. Remove the bolts and the accelerator cable bracket.

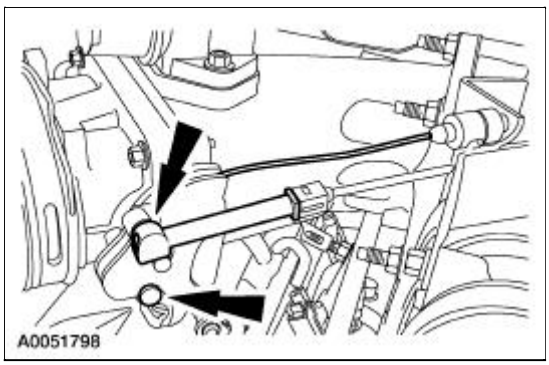


6. To install, reverse the removal procedure.

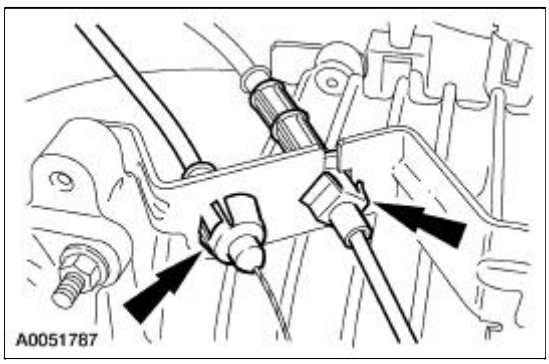
Accelerator Cable Bracket —Supercharged Engine

Removal and Installation

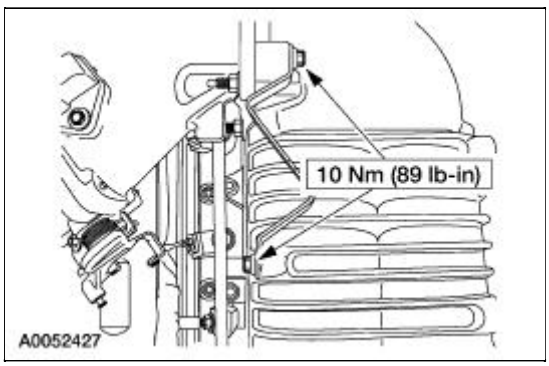
1. Disconnect the accelerator cable and speed control cable.



2. Depress the tabs and disconnect the accelerator cable and speed control cable from the accelerator cable bracket



3. Remove the bolts and the accelerator cable bracket.



4. To install, reverse the removal procedure.

Torque Specifications

Description	Nm	lb-ft	lb-in
Accelerator pedal and shaft nuts	18	13	—
Accelerator cable bracket (Supercharged engine)	10	—	89
Accelerator cable bolts (Supercharged engine)	4	—	35

Torque Specifications

Description	Nm	lb-ft	lb-in
Battery ground cable	7-10	—	62-89
Horn contact screws	6.5-7.5	—	58-66
Speed control actuator switch screws	6.5-7.5	4.8-5.5	—
Speed control servo bracket bolt	7	—	62

Speed Control

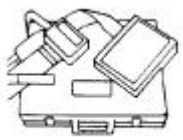
The speed control system consists of the following components:

- speed control actuator cable (9A825)
- deactivator switch
- output shaft sensor (OSS)
- speed control actuator switches (9C888)
- brake pedal position (BPP) switch (13480)
- speed control servo (9C735)
- clutch pedal position switch (manual transmission only)

Speed Control

Refer to Wiring Diagrams Cell 31 , Speed Control for schematic and connector information.

Special Tool(s)

ST2332-A	Worldwide Diagnostic System (WDS) 418-F224, New Generation STAR (NGS) Tester 418-F052, or equivalent diagnostic tool
ST1137-A	73 Digital Multimeter or equivalent 105-R0051
 ST1391-A	Breakout Box, EEC-V Control System 418-049, or equivalent 014-00950

Principles of Operation

The speed control system is designed to maintain vehicle speed above 48 km/h (30 mph). After the ON switch is depressed, depressing the SET/ACCEL switch will activate the speed control servo. To increase a set speed, either depress and hold for continuous acceleration, or momentarily tap the SET/ACCEL switch for 1.6 km/h (1 mph) acceleration increments. To decrease a set speed, depress and hold the COAST switch until the target speed is reached, or momentarily tap the COAST switch for 1.6 km/h (1 mph) deceleration increments. When the speed control system has been disabled by tapping the brake pedal, the RESUME switch can be depressed and the vehicle will return to the original set speed if the vehicle is traveling over 48 km/h (30 mph) and the OFF switch has not been depressed.

NOTE: The deactivator switch is provided as an additional safety feature. Normally, when the brake pedal is depressed, an electrical signal from the brake lamp circuit to the speed control servo will deactivate the system. Under increased brake pedal effort, the deactivator switch will open and remove power to the speed control servo, releasing the throttle independent of the speed control servo.

NOTE: The air bag sliding contract provides the electrical interface between the steering column wiring and the speed control actuator switches in the steering wheel.

The inputs to the speed control servo are the:

- vehicle speed signal.

- speed control actuator switches.
- brake pedal position (BPP) switch.
- clutch pedal position (CPP) switch.
- deactivator switch.

The output of the speed control servo is the:

- speed control actuator cable controlling the throttle position.

Inspection and Verification

NOTE: If any concerns are noted with the speedometer, stoplamps, or horn, address those concerns by referring to their associated sections before continuing speed control diagnosis.

1. Verify the customer concern by operating the speed control system.

2. Visually inspect for obvious signs of mechanical and electrical damage.

Visual Inspection Chart

Mechanical	Electrical
● Deactivator switch ● Speed control actuator cable not attached to throttle ● Speed control actuator cable not fully seated to the engine bracket	● Central junction box (CJB) Fuse: ■ 15 (15A) ■ 33 (15A) ■ 35 (15A) ● Battery junction box (BJB) fuse: ■ HORN (20A) ● Wiring harness ● Loose or corroded connections ● Speed control actuator switches

3. If the fault is not visually evident, verify the symptom and GO to the Symptom chart.

Symptom Chart

NOTE: New speed control diagnostic software is available in Version 12 or higher for the diagnostic tool. When using this software, it is necessary to use Next Generation Speed Control Adapter 007-00586 with the diagnostic tool.

NOTE: Refer to the Wiring Diagrams for connector numbers stated in the Pinpoint Test.

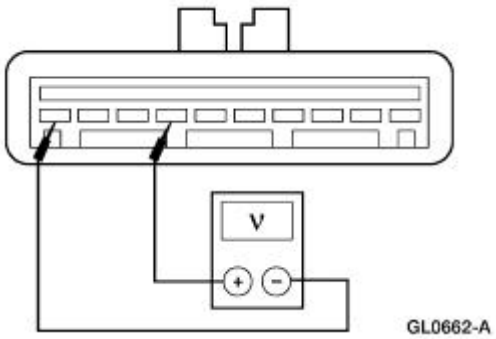
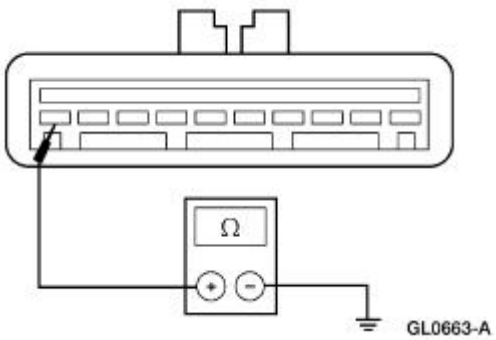
Symptom Chart

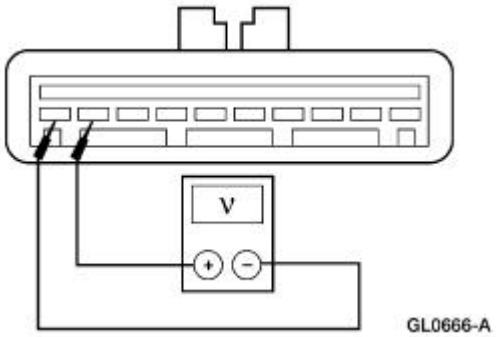
Condition	Possible Sources	Action
● The speed control is	● Central junction	● Go To Pinpoint Test A .

inoperative	box (CJB) fuse 17 (15A), 33 (15A). ● Battery junction box (BJB) fuse HORN (20A). ● Circuitry. ● Deactivator switch. ● Clutch pedal position (CPP) switch. ● Speed control actuator switch. ● Speed control servo. ● Powertrain control module (PCM).	
● The set speed fluctuates	● Circuitry. ● Speed control servo. ● Powertrain control module (PCM). ● Engine.	● Go To Pinpoint Test B . ● REFER to the Powertrain Control/Emissions Diagnosis (PC/ED) manual.
● The speed control does not disengage when the brakes are applied	● Central junction box (CJB) fuse 33 (15A). ● Circuitry. ● Brake pedal position (BPP) switch. ● Speed control servo.	● Go To Pinpoint Test C .
● The speed control does not disengage when the clutch is applied	● Cluch pedal position (CPP) switch. ● Speed control servo.	● Go To Pinpoint Test D .
● The speed control switch is inoperative— COAST	● Speed control actuator switch. ● Speed control servo.	● Go To Pinpoint Test E .
● The speed control switch is inoperative—SET/ACCEL	● Speed control actuator switch. ● Speed control servo.	● Go To Pinpoint Test F .
● The speed control switch is inoperative—RESUME	● Speed control actuator switch. ● Speed control servo.	● Go To Pinpoint Test G .
● The speed control switch is inoperative—OFF	● Speed control actuator switch. ● Speed control servo.	● Go To Pinpoint Test H .

Pinpoint Tests

PINPOINT TEST A: THE SPEED CONTROL IS INOPERATIVE

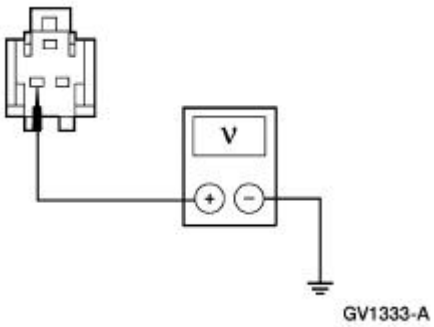
Test Step	Result / Action to Take
A1 CHECK THE SPEED CONTROL SERVO VOLTAGE AND GROUND	
• Key in OFF position. • Disconnect: Speed Control Servo C122. • Key in ON position. • Measure the voltage between speed control servo C122 Pin 7, Circuit 294 (WH/LB), harness side and speed control servo C122 Pin 10, Circuit 1205 (BK), harness side.  GL0662-A • **Is voltage greater than 10 volts?**	**Yes** GO to A3 . **No** GO to A2 .
A2 CHECK THE CIRCUIT 1205 (BK) FOR AN OPEN	
• Key in OFF position. • Measure the resistance between speed control servo C122 Pin 10, Circuit 1205 (BK), harness side and ground.  GL0663-A • **Is the resistance less than 5 ohms?**	**Yes** REPAIR Circuit 294 (WH/LB). TEST the system for normal operation. **No** REPAIR Circuit 1205 (BK). TEST the system for normal operation.
A3 CHECK DEACTIVATOR SWITCH CIRCUITRY	
• Measure the voltage between speed control servo C122 Pin 9, Circuit 636 (OG), harness side and speed control servo C122 Pin 10, Circuit 1205 (BK), harness side.	**Yes** GO to A6 . **No** GO to A4 .



- **Is the voltage greater than 10 volts?**

A4 CHECK CIRCUIT 10 (LG/RD) FOR AN OPEN

- Disconnect: Deactivator Switch C2210.
- Measure the voltage between deactivator switch C2210 Pin 1, Circuit 10 (LG/RD), harness side and ground.



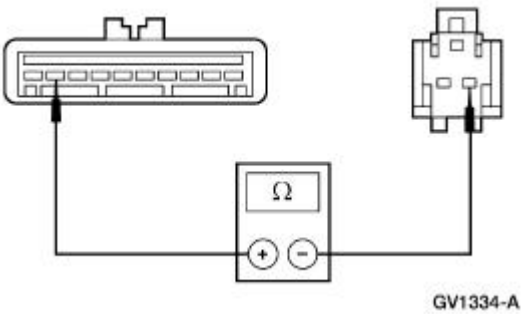
- **Is the voltage greater than 10 volts?**

Yes
GO to A5 .

No
REPAIR the circuit. TEST the system for normal operation.

A5 CHECK CIRCUIT 636 (OG) FOR AN OPEN

- Measure the resistance between speed control servo C122 Pin 9, Circuit 636 (OG), harness side and deactivator switch C2210 Pin 2, Circuit 636 (OG), harness side.



- **Is the resistance less than 5 ohms?**

Yes
INSTALL a new deactivator switch; REFER to Switch—Deactivator . TEST the system for normal operation.

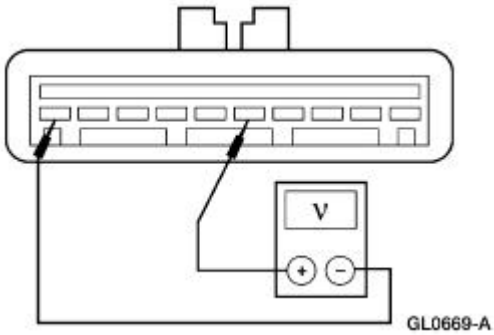
No
REPAIR the circuit. TEST the system for normal operation.

A6 CHECK THE SPEED CONTROL ACTUATOR SWITCH ON CIRCUITRY

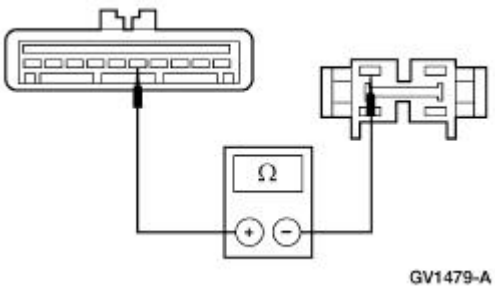
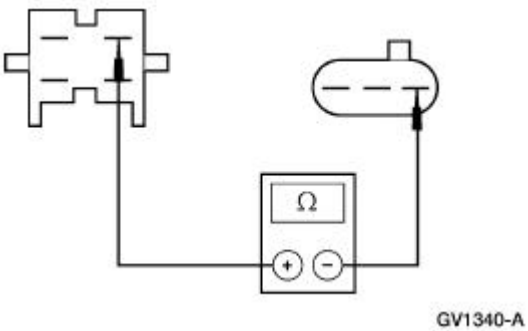
- Measure the voltage between speed control servo C122 Pin 5, Circuit 151 (LB/BK), harness side and speed control servo C122 Pin 10, Circuit 1205 (BK), harness side, while the speed control actuator switch ON is depressed.

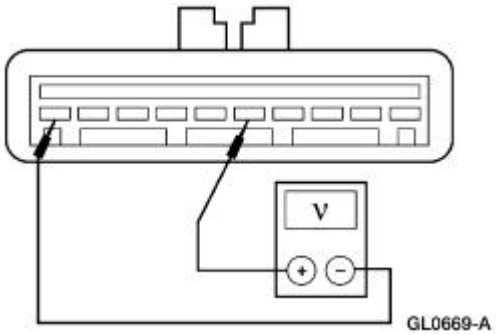
Yes
GO to A9 .

No
GO to A7 .

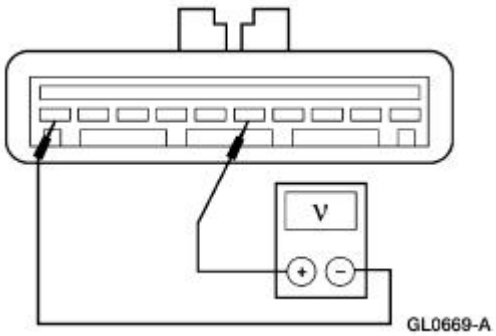
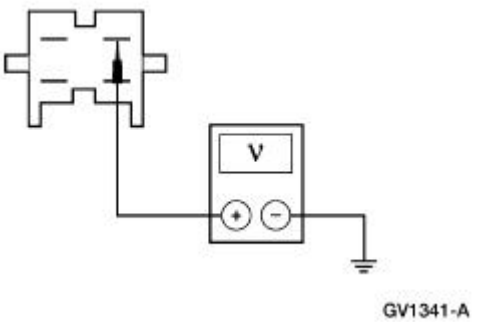


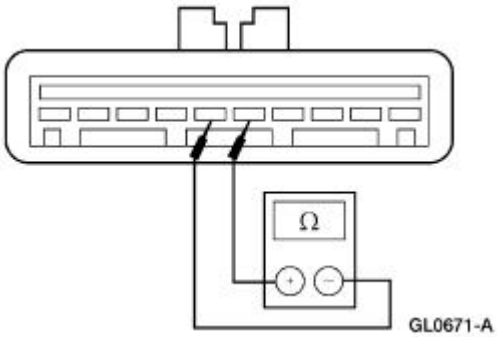
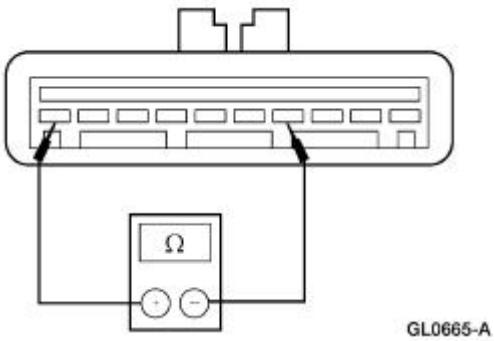
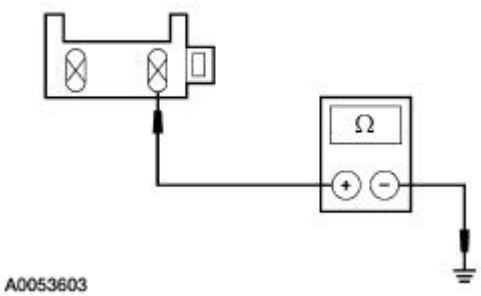
- **Is the voltage greater than 10 volts?**

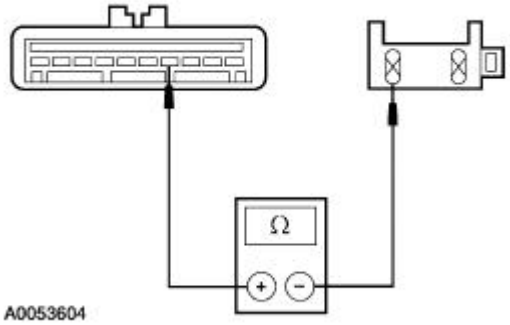
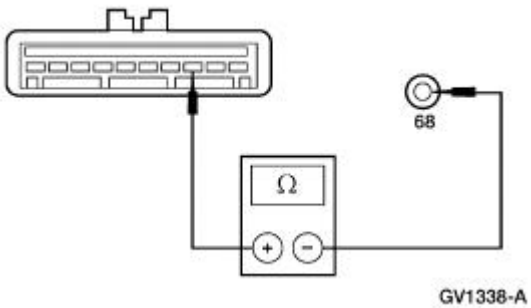
A7 CHECK CIRCUIT 151 (LB/BK) FOR AN OPEN • Disconnect: Air Bag Sliding Contact C218a. • Measure the resistance between speed control servo C122 Pin 5, Circuit 151 (LB/BK), harness side and air bag sliding contact C218a Pin 4, Circuit 151 (LB/BK), harness side.  • **Is the resistance less than 5 ohms?**	**Yes** GO to A8 . **No** REPAIR the circuit. TEST the system for normal operation.
A8 CHECK THE AIR BAG SLIDING CONTACT • Remove the air bag; REFER to Section 501-20B . • Disconnect: Speed Control Actuator Switch. • Measure the resistance between bottom of air bag sliding contact Pin 1 (component side) and top of air bag sliding contact Pin 3 (component side).  • **Is the resistance less than 5 ohms?**	**Yes** INSTALL a new speed control actuator switch; REFER to Switch—Speed Control Actuator . TEST the system for normal operation. **No** INSTALL a new air bag sliding contact; REFER to Section 501-20B . TEST the system for normal operation.
A9 CHECK THE SPEED CONTROL ACTUATOR SWITCH ON CIRCUITRY FOR SHORT TO POWER • Key in ON position. • Measure the voltage between speed control servo C122 Pin 5, Circuit 151 (LB/BK), harness side and speed control servo C122 Pin 10, Circuit 1205 (BK), harness side.	**Yes** GO to A10 . **No** GO to A12 .



- **Is any voltage present?**

A10 CHECK CIRCUIT 151 (LB/BK) FOR SHORT TO POWER	
• Key in OFF position. • Disconnect: Air Bag Sliding Contact C218a. • Key in ON position. • Measure the voltage between speed control servo C122 Pin 5, Circuit 151 (LB/BK), harness side and speed control servo C122 Pin 10, Circuit 1205 (BK), harness side.  • **Is any voltage present?**	**Yes** REPAIR the circuit. TEST the system for normal operation. **No** GO to A11 .
A11 CHECK THE AIR BAG SLIDING CONTACT	
• Key in OFF position. • Remove the air bag; REFER to Section 501-20B . • Disconnect: Speed Control Actuator Switch. • Key in ON position. • Measure the voltage between bottom of air bag sliding contact Pin 1 (component side) and ground.  • **Is any voltage present?**	**Yes** INSTALL a new air bag sliding contact; REFER to Section 501-20B . TEST the system for normal operation. **No** INSTALL a new speed control actuator switch; REFER to Switch—Speed Control Actuator . TEST the system for normal operation.
A12 CHECK THE SPEED CONTROL ACTUATOR SET/ACCEL CIRCUITRY	
• Key in OFF position. • Measure the resistance between speed control servo C122 Pin 5, Circuit 151 (LB/BK), harness side and speed control servo C122 Pin 6, Circuit 848 (DG/OG), harness side, while the speed control actuator switch SET/ACCEL is depressed.	**Yes** GO to A13 . **No** INSTALL a new speed control actuator switch;

 ● **Is the resistance between 612 and 748 ohms?**	REFER to Switch—Speed Control Actuator . TEST the system for normal operation.
A13 CHECK THE BPP SWITCH CIRCUITRY	
● Measure the resistance between speed control servo C122 Pin 4, Circuit 511 (LG), harness side, and speed control servo C122 Pin 10, Circuit 1205 (BK), harness side.  ● **Is the resistance less than 20 ohms?**	**Yes** GO to A16 . **No** If automatic transmission, REPAIR Circuit 511 (LG) and Circuit 810 (LG/RD) as necessary. TEST the system for normal operation. If manual transmission, GO to A14 .
A14 CHECK CIRCUIT 511 (LG) AND CIRCUIT 810 (RD/LG) FOR AN OPEN	
● Disconnect: CPP Switch C2072. ● Measure the resistance between CPP Switch C2072 Pin 1, Circuit 511 (LG), harness side and ground.  ● **Is the resistance less than 20 ohms?**	**Yes** GO to A15 . **No** REPAIR Circuit 511 (LG) and Circuit 810 (LG/RD) as necessary. TEST the system for normal operation.
A15 CHECK CIRCUIT 511 (LG) FOR AN OPEN	
● Measure the resistance between speed control servo C122 Pin 4, Circuit 511 (LG), harness side and CPP switch C2072 Pin 2, Circuit 511 (LG), harness side.	**Yes** INSTALL a new CPP switch. TEST the system for normal operation. **No** REPAIR the circuit. TEST the system for normal operation.

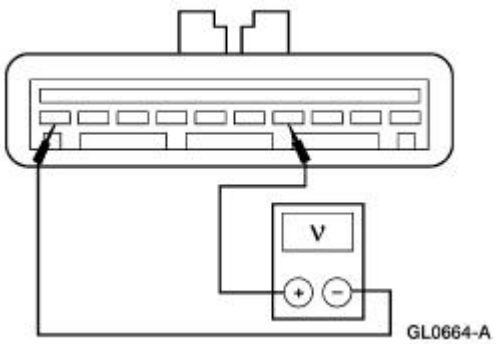
 ● **Is the resistance less than 5 ohms?**	
A16 CHECK CIRCUIT 239 (WH/OG) FOR AN OPEN ● Disconnect: PCM C175. ● Connect EEC-V 104-Pin Breakout Box. ● Measure the resistance between speed control servo C122 pin 3, circuit 239 (WH/OG), harness side and Breakout Box, EEC-V Control System pin 68, circuit 239 (WH/OG), harness side.  ● **Is the resistance less than 5 ohms?**	**Yes** GO to A17 . **No** REPAIR the circuit. TEST the system for normal operation.
A17 CHECK THE SPEED CONTROL SERVO ● INSTALL a known good speed control servo. ● Test drive the vehicle for correct operation. ● **Does the speed control operate correctly?**	**Yes** INSTALL a new speed control servo; REFER to Actuator—Speed Control Servo . TEST the system for normal operation. **No** INSTALL a new PCM; REFER to Section 303-14 . TEST the system for normal operation.

PINPOINT TEST B: THE SET SPEED FLUCTUATES

Test Step	Result / Action to Take
B1 CHECK THAT CONDITION OCCURS ONLY WHILE USING SPEED CONTROL ● Check that the condition does not occur when driving without speed control. ● **Does the condition occur without speed control?**	**Yes** REPAIR engine as necessary. TEST the system for normal operation. **No** GO to B2 .

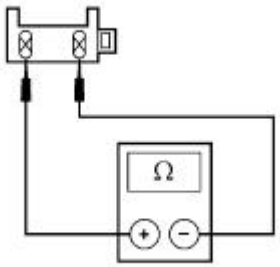
B2 CHECK THE SPEED CONTROL ACTUATOR CABLE	
• **NOTE:** The speed control actuator cable must be disconnected at both ends while carrying out this test. • Check the speed control actuator cable for sticking or binding at the speed control servo and throttle body. • **Is the speed control actuator cable OK?**	**Yes** GO to B3 . **No** INSTALL a new speed control actuator cable; REFER to Actuator Cable—Speed Control . TEST the system for normal operation.
B3 CHECK THE SPEED CONTROL SERVO	
• INSTALL a known good speed control servo. • Test drive the vehicle for correct operation. • **Does the speed control operate correctly?**	**Yes** INSTALL a new speed control servo; REFER to Actuator—Speed Control Servo . TEST the system for normal operation. **No** INSTALL a new PCM; REFER to Section 303-14 . TEST the system for normal operation.

PINPOINT TEST C: THE SPEED CONTROL DOES NOT DISENGAGE WHEN THE BRAKES ARE APPLIED

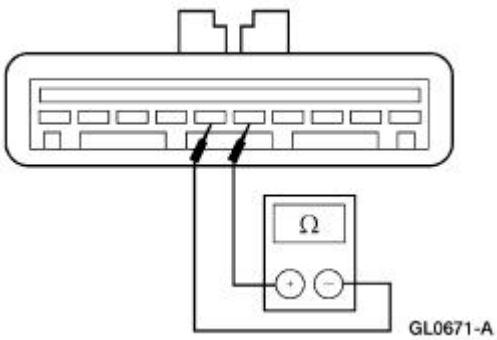
Test Step	Result / Action to Take
C1 CHECK THE BPP SWITCH CIRCUITRY	
• Key in OFF position. • Disconnect: Speed Control Servo C122 . • Measure the voltage between speed control servo C122 Pin 4, Circuit 511 (LG), harness side and speed control servo C122 Pin 10, Circuit 1205 (BK), harness side, while depressing the brake pedal.  • **Is the voltage greater than 10 volts?**	**Yes** INSTALL a new speed control servo; REFER to Actuator—Speed Control Servo . TEST the system for normal operation. **No** REPAIR Circuit 810 (RD/LG) and Circuit 511 (LG) as necessary. TEST the system for normal operation.

PINPOINT TEST D: THE SPEED CONTROL DOES NOT DISENGAGE WHEN THE CLUTCH IS APPLIED

Test Step	Result / Action to Take
D1 CHECK THE CLUTCH PEDAL POSITION (CPP) SWITCH	
• Key in OFF position. • Disconnect: CPP Switch C2072. • Measure the resistance between CPP switch pin 2 (component side) and CPP switch pin 1 (component side),	**Yes** INSTALL a new speed control servo; REFER to Actuator—Speed Control

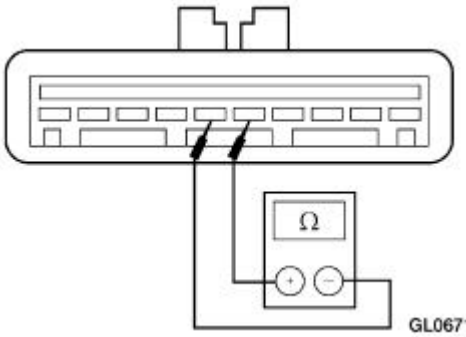
while depressing and releasing clutch pedal.  GV1339-A ● **Is the resistance greater than 10,000 ohms with the clutch pedal depressed and less than 5 ohms with the clutch pedal released?**	Servo . TEST the system for normal operation. **No** INSTALL a new CPP switch. TEST the system for normal operation.

PINPOINT TEST E: THE SPEED CONTROL SWITCH IS INOPERATIVE—COAST

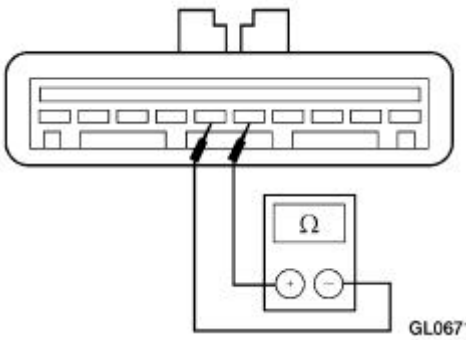
Test Step	Result / Action to Take
E1 CHECK THE SPEED CONTROL ACTUATOR SWITCH	
● Key in OFF position. ● Disconnect: Speed Control Servo C122. ● Measure the resistance between speed control servo C122 Pin 5, Circuit 151 (LB/BK), harness side and speed control servo C122 Pin 6, Circuit 848 (DG/OG), harness side, while pressing the speed control actuator switch COAST.  GL0671-A ● **Is the resistance between 108 and 132 ohms?**	**Yes** INSTALL a new speed control servo; REFER to Actuator—Speed Control Servo . TEST the system for normal operation. **No** INSTALL a new speed control actuator switch; REFER to Switch—Speed Control Actuator . TEST the system for normal operation.

PINPOINT TEST F: THE SPEED CONTROL SWITCH IS INOPERATIVE—SET/ACCEL

Test Step	Result / Action to Take
F1 CHECK THE SPEED CONTROL ACTUATOR SWITCH	
● Key in OFF position. ● Disconnect: Speed Control Servo C122. ● Measure the resistance between speed control servo C122 Pin 5, Circuit 151 (LB/BK), harness side and speed control servo C122 Pin 6, Circuit 848 (DG/OG), harness side, while pressing the speed control actuator switch SET/ACCEL.	**Yes** INSTALL a new speed control servo; REFER to Actuator—Speed Control Servo . TEST the system for normal operation.

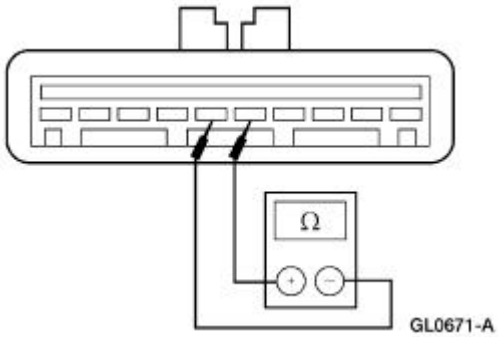
 ● **Is the resistance between 612 and 748 ohms?**	**No** INSTALL a new speed control actuator switch; REFER to Switch—Speed Control Actuator . TEST the system for normal operation.

PINPOINT TEST G: THE SPEED CONTROL SWITCH IS INOPERATIVE — RESUME

Test Step	Result / Action to Take
G1 CHECK THE SPEED CONTROL ACTUATOR SWITCH	
● Key in OFF position. ● Disconnect: Speed Control Servo C122. ● Measure the resistance between speed control servo C122 Pin 5, Circuit 151 (LB/BK), harness side and speed control servo C122 Pin 6, Circuit 848 (DG/OG), harness side while pressing the speed control actuator switch RESUME.  ● **Is the resistance between 1,980 and 2,420 ohms?**	**Yes** INSTALL a new speed control servo; REFER to Actuator—Speed Control Servo . TEST the system for normal operation. **No** INSTALL a new speed control actuator switch; REFER to Switch—Speed Control Actuator . TEST the system for normal operation.

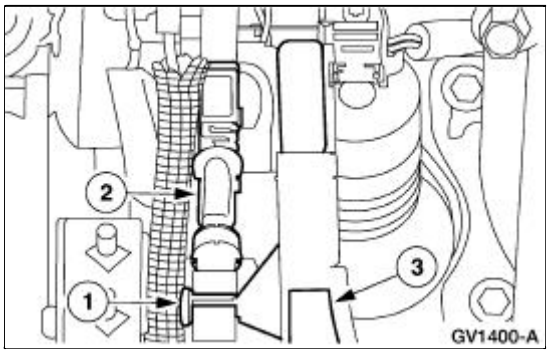
PINPOINT TEST H: THE SPEED CONTROL SWITCH IS INOPERATIVE—OFF

Test Step	Result / Action to Take
H1 CHECK THE SPEED CONTROL ACTUATOR SWITCH	
● Key in OFF position. ● Disconnect: Speed Control Servo C122. ● Measure the resistance between speed control servo C122 Pin 5, Circuit 151 (LB/BK), harness side and speed control servo C122 Pin 6, Circuit 848 (DG/OG), harness side while pressing the speed control actuator switch OFF.	**Yes** INSTALL a new speed control servo; REFER to Actuator—Speed Control Servo . TEST the system for normal operation. **No**

 • **Is the resistance less than 5 ohms?**	INSTALL a new speed control actuator switch; REFER to Switch—Speed Control Actuator . TEST the system for normal operation.

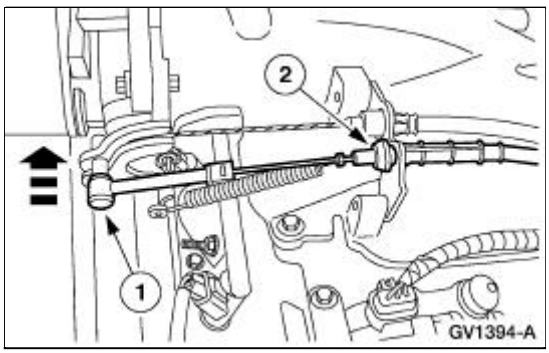
Switch Adjustment —Deactivator

1. Adjust the deactivator switch.
    1. Disconnect the switch hook from the brake pedal.
    2. Depress the switch hook and plunger into the deactivator switch body until the adjustment locking tab snaps into place within the hook.
    3. Depress the brake pedal and reattach the switch hook.

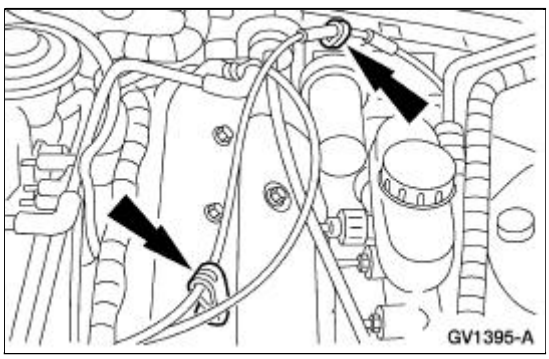


Actuator Cable —Speed Control

1. Remove the speed control actuator cable end from the throttle body.
    1. Lift the speed control cable from the throttle nailhead.
    2. Release the speed control cable from the throttle bracket.

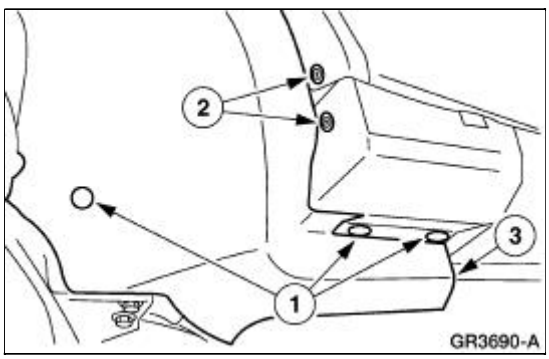


2. Remove the speed control cable from the retaining clips.

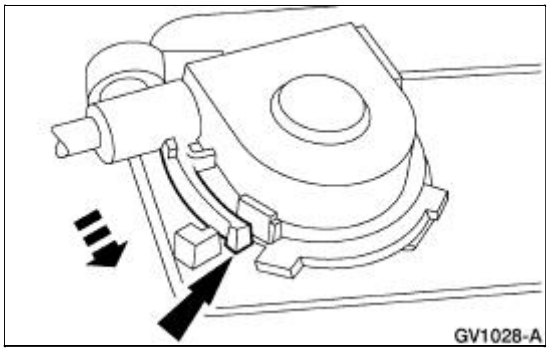


3. Remove the LH front wheel and tire assembly. For additional information, refer to Section 204-04

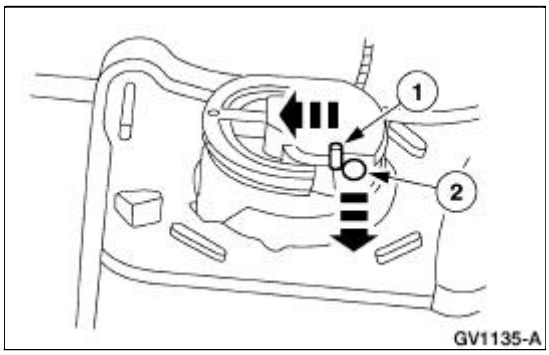
4. Position aside the LH front splash shield.
    1. Remove the pin-type retainers.
    2. Remove the screws.
    3. Position aside the LH front splash shield.



5. Depress the locking tab and rotate the speed control actuator cable cap to remove.



6. Disconnect the speed control actuator cable from the speed control servo pulley.
    1. Gently push in the retaining spring.
    2. Disconnect the speed control cable slug from the speed control servo pulley.

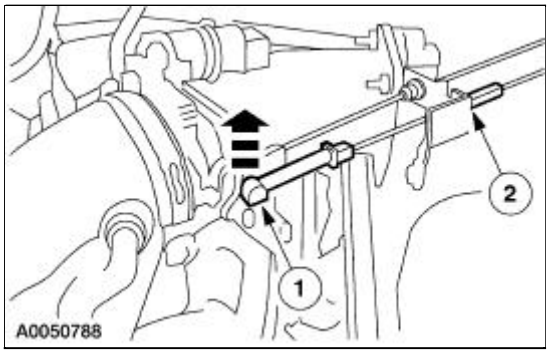


Installation

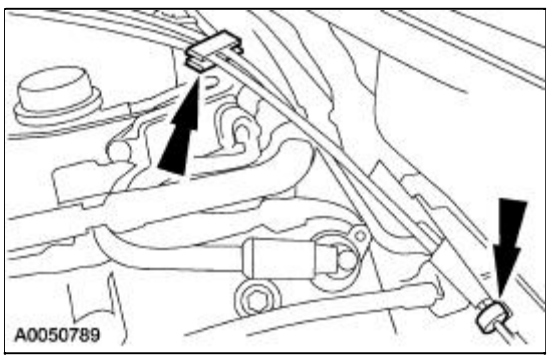
1. To install, reverse the removal procedure.

Actuator Cable —Speed Control-Cobra

1. Remove the speed control actuator cable end from the throttle body.
    1. Lift the speed control cable from the throttle nailhead.
    2. Release the speed control cable from the throttle bracket.

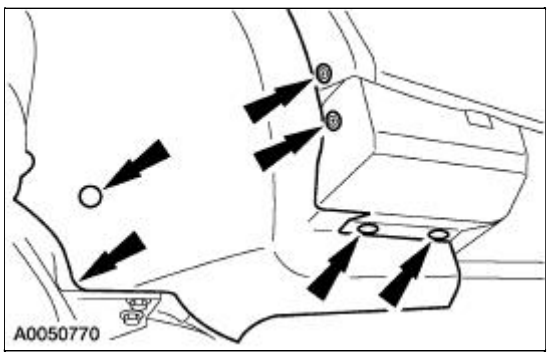


2. Remove the speed control cable from the retaining clips.

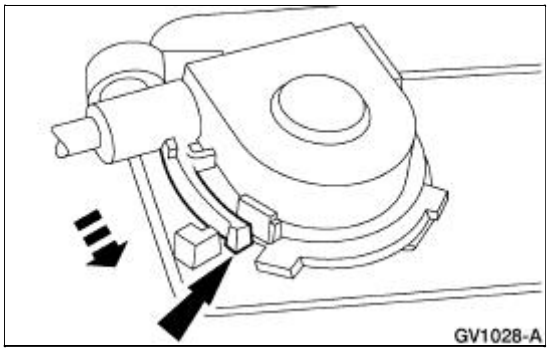


3. Remove the LH front wheel and tire assembly. For additional information, refer to Section 204-04 .

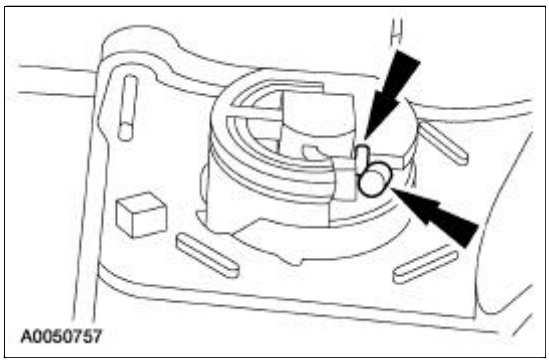
4. Position aside the LH front splash shield.
    - Remove the pin-type retainers.
    - Remove the screws.



5. Depress the locking tab and rotate the speed control actuator cable cap to remove.



6. Gently push in the retaining spring while disconnecting the speed control actuator cable from the speed control actuator pulley.



Installation

1. To install, reverse the removal procedure.

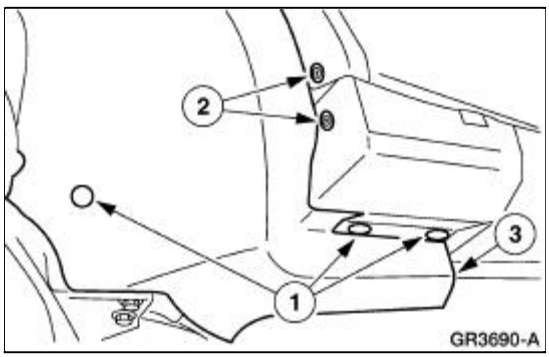
Actuator —Speed Control Servo

1. **CAUTION: Electronic modules are sensitive to static electrical charges. If exposed to these charges, damage may result.**

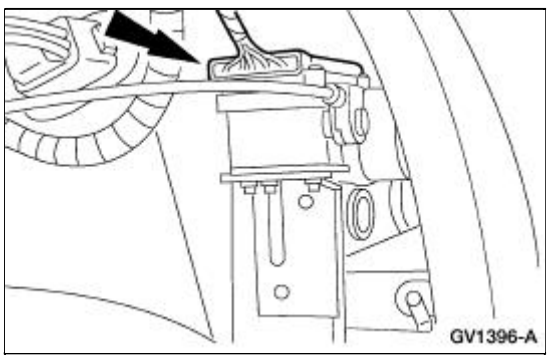
   Disconnect the battery ground cable.

2. Remove the LH wheel and tire; refer to Section 204-04 .

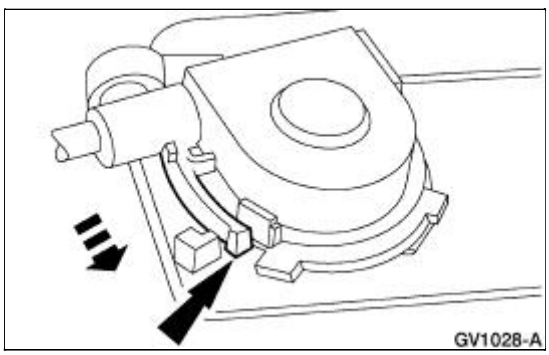
3. Position aside the LH front splash shield.
   1. Remove the pin-type retainers.
   2. Remove the screws.
   3. Position aside the LH front splash shield.



4. Disconnect the speed control servo electrical connector.

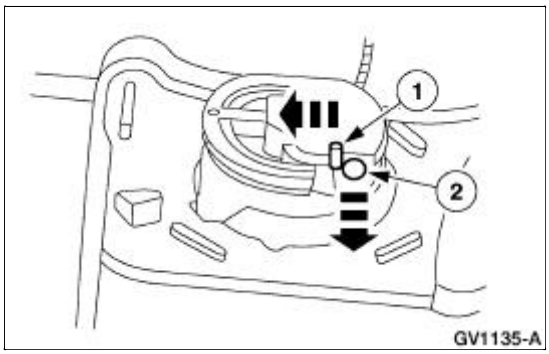


5. Depress the locking tab and rotate the speed control actuator cable cap to remove.

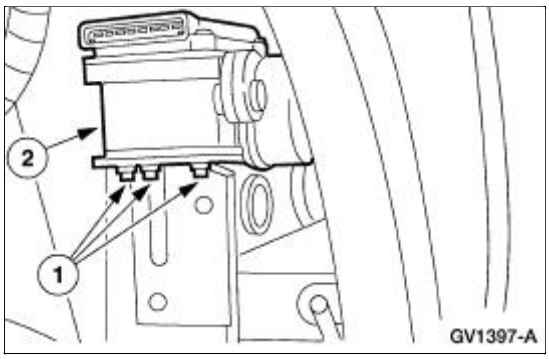


6. Disconnect the speed control cable from the throttle nailhead.

7. Disconnect the speed control actuator cable from the speed control servo pulley.
    1. Gently push in the retaining spring.
    2. Disconnect the speed control cable slug from the speed control servo pulley.



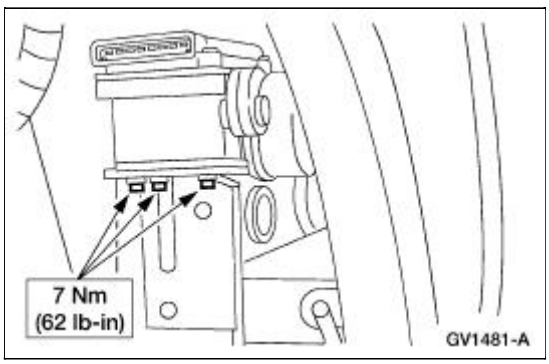
8. Remove the speed control servo.
    1. Remove the bolts.
    2. Remove the speed control servo.



Installation

1. **NOTE:** When the battery is disconnected and reconnected, some abnormal drive symptoms may occur while the vehicle relearns its adaptive strategy. The vehicle may need to be driven 16 km (10 mi) or more to relearn the strategy.

    To install, reverse the removal procedure.

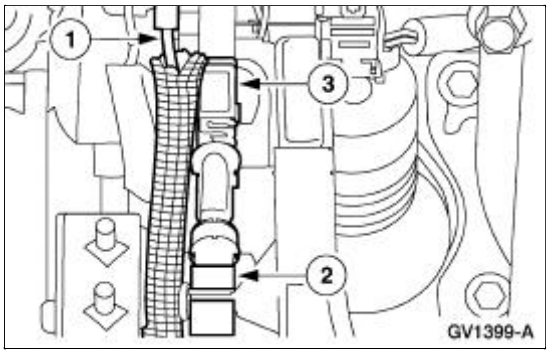


Switch —Deactivator

Removal

1. Disconnect the battery ground cable.

2. Remove the deactivator switch.
    1. Disconnect the deactivator switch electrical connector.
    2. Detach the lower deactivator switch hook.
    3. Detach the upper deactivator pivot.



Installation

1. **NOTE:** When the battery is disconnected and reconnected, some abnormal drive symptoms may occur while the vehicle relearns its adaptive strategy. The vehicle may need to be driven 16 km (10 mi) or more to relearn the strategy.

    To install, reverse the removal procedure.

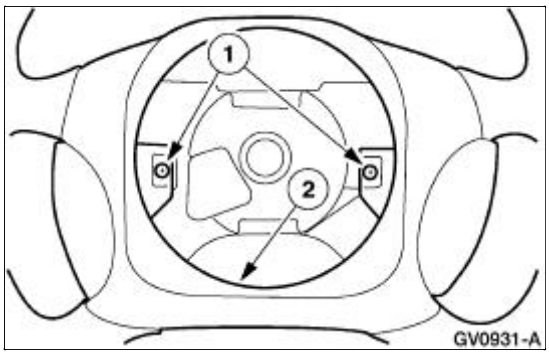
    - Adjust the deactivator switch, refer to Switch Adjustment—Deactivator

Switch —Speed Control Actuator

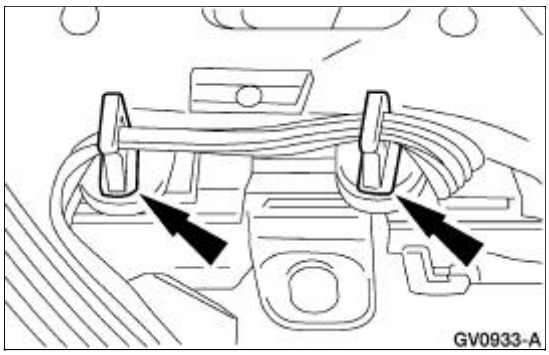
Removal

1. Remove the steering wheel; refer to Section 211-04 .

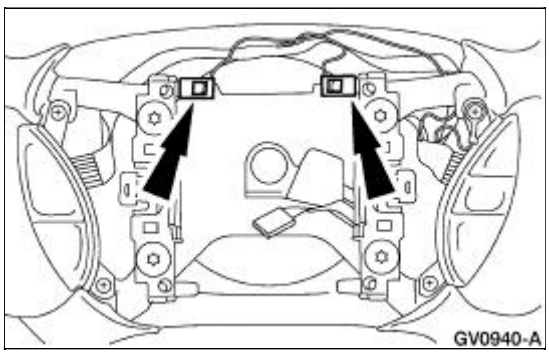
2. Remove the steering wheel rear cover.
    1. Remove the screws.
    2. Remove the steering wheel rear cover.



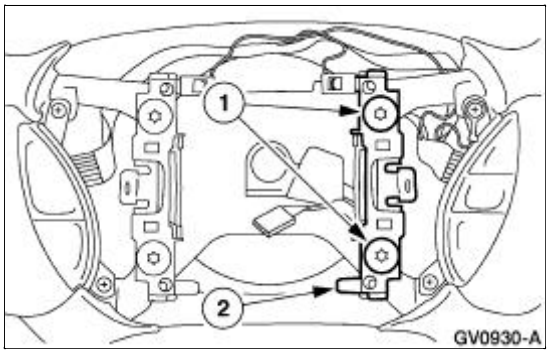
3. Remove the ribbon harness from the clips.



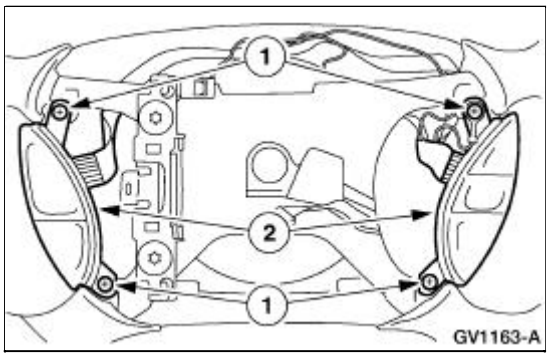
4. Remove the horn contact electrical connectors.



5. Remove the right side horn contact.
    1. Remove the screws.
    2. Remove the contact.



6. Remove the speed control actuator switch assembly.
    1. Remove the screws.
    2. Remove the speed control actuator switch assembly.



Installation

1. To install, reverse the removal procedure.